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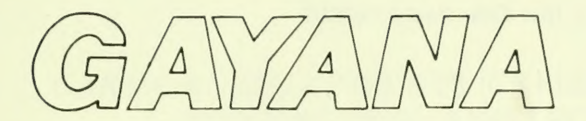
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UNIVERSIDAD DE CONCEPCION-CHILE

"Los infinitos seres naturales no podrán perfectamente conocerse, sino luego que los sabios del país hagan un especial estudio de ellos".

CLAUDIO GAY, Hist. Chile, Zool. 1:14(1847)

Portada:
Galeopsis tetrahit L., planta advena de Chile

ESTA REVISTA SE TERMINO DE IMPRIMIR
EN LOS TALLERES DE
EDITORA ANIBAL PINTO, S.A.,
MAIPU 769, CONCEPCION-CHILE,
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CAREX ANDINA PHILIPPI (CYPERACEAE): ITS TAXONOMY, DISTRIBUTION, AND LECTOTYPIFICATION

CAREX ANDINA *PHILIPPI (CYPERACEAE): SU TAXONOMIA, DISTRIBUCION Y LECTOTIPIFICACION*

Gerald A. Wheeler* and Mélica Muñoz-Schick**

ABSTRACT

Carex andina occurs in Central Chile and the northwestern part of Argentine Patagonia, where it grows on dry and rocky slopes at elevations of about 1200-3300 m. Reports of this species from southern Patagonia are based on misidentified specimens. Morphological differences between *C. andina* and *C. setifolia* are discussed. The salient features of *C. andina* are: perigynia obovate, essentially beakless; achenes obovate; rachilla relatively broad, lanceolate, 1/3 to 3/4 the length of the achene; and leaf sheaths with the ventral band smooth at the mouth. A lectotype is chosen for *C. andina*.

KEYWORDS: *Carex andina*, Cyperaceae, southern South America, lectotype.

RESUMEN

Carex Andina se encuentra en Chile central y en la región noroeste de la Patagonia argentina, donde crece en laderas secas y rocosas entre 1200-3300 m. Citas de esta especie para el sur de la Patagonia están basadas en especímenes mal identificados. Se discuten las diferencias morfológicas entre *C. andina* y *C. setifolia*. Las características sobresalientes de *C. andina* son: periginios obovados, casi sin pico; aquenios obovados; raquilla relativamente ancha, lanceolada, de 1/3 a 3/4 del largo del aquenio; vainas foliares con la banda ventral lisa en la boca. Se elige un lectotipo para *C. andina*.

INTRODUCTION

A recent study of *Carex* L. (Cyperaceae) material from Argentina and Chile, as well as a survey of South American literature, reveals that some confusion exists regarding the distribution of *Carex andina* Philippi (sect. *Junciformes* (Boeckeler) Kük.) in southern South America. Examination of syntypes of *C. andina* reveals that some specimens previously reported as "*C. andina*" are actually referable to other species; also, some specimens clearly assignable to *C. andina* have erroneously been reported as other taxa (e.g., *C. setifolia* Kunze ex Kunth var. *neuquensis* Barros). Below we attempt to: (1) clarify the distribution of *C. andina* in southern South America, (2) point out salient differences in morphology between *C. andina* and *C. setifolia* (and its varieties), species which have been confused in the recent past, (3) place the name *C.*

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setifolia var. *neuquensis* in the synonymy of *C. andina*, (4) discuss the status of "*C. andina*" sensu Barros (1935, 1947, 1969), and (5) select a lectotype for *C. andina*.

Full citations are given near the end of this report for specimens of *Carex andina* collected in Argentina and Chile; a distribution map for *C. andina* is also provided (Fig. 1). When discussing members of the *C. setifolia* species complex, we have retained the nomenclature used by Kükenthal (1909) and Barros (1935, 1947, 1969).

MORPHOLOGY

Examination of syntypes of *Carex andina* (Fig. 2A-B) reveals that the perigynia are obovate and essentially beakless, the achenes obovate, and the rachilla broadly lanceolate and about 1/3 to 3/4 the length of the achene. By contrast, in *C. setifolia* var. *setifolia* (Fig. 4A-B) the perigynia are pyriform and distinctly beaked, the achenes oblong, and the rachilla setiform and somewhat shorter than to slightly exceeding the achene. Some of the aforementioned diagnostic features of var. *setifolia* have been illustrated by Kunze (1840-51, Tab. 26) and Kükenthal (1909, Fig. 18: p. 84). Furthermore, an isotype of the typical variety of *C. setifolia* (Poeppig I. N° 26 [(BM!]) from Chile, clearly possesses these characters, although the perigynia and achenes of the BM specimen are somewhat immature. It is noteworthy that *C. setifolia* var. *colchaguensis* (Philippi) Kük. and var. *pungens* (Boeckeler) Kük. (sensu Kükenthal 1909) also have pyriform perigynia, oblong achenes, and a setiform rachilla. A morphological comparison of 11 characters of *C. andina* and *C. setifolia* var. *setifolia* is given in Table I.

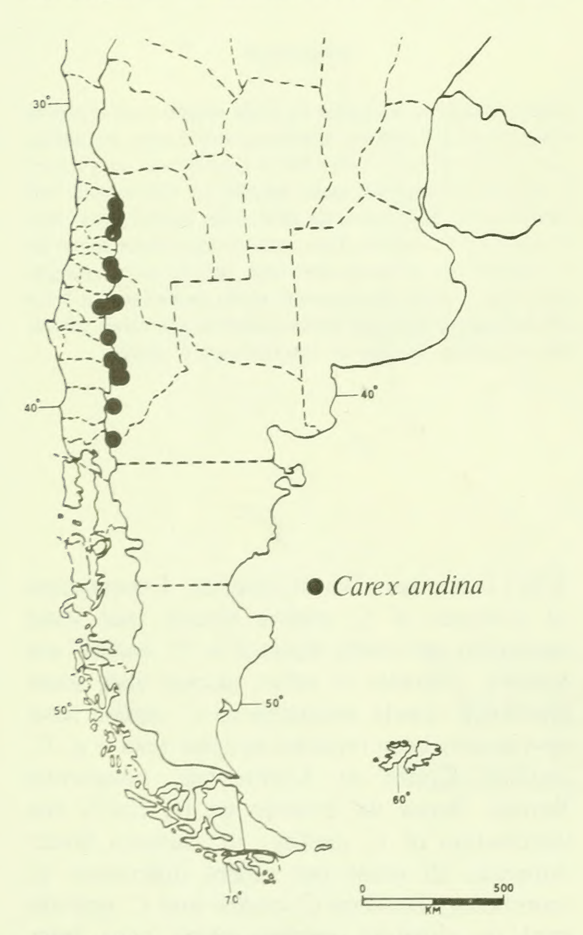


FIG. 1. Map of southern South America showing the distribution of *Carex andina*.

DISCUSSION

Philippi (1896, p. 485) described *Carex andina* from plants collected in the Andes of central Chile, and subsequently Kükenthal (1899, 1909) recognized it as a good species. More recent workers have reported *C. andina* from Argentina (Barros 1935, 1947, 1969) as well as from Chile (Léveillé 1915; Marticorena and Quezada 1985). Kükenthal (1910) described a variety of *C. andina*, var. *subabscondita* Kük., from plants collected in central Patagonia (Chubut Province, Argentina), but these low-growing plants, which Wheeler (1986) considers to be conspecific with *C. nelmesiana* Barros, are more closely related (i.e., morphologically more similar) to the other low-growing Patagonian members of sect. *Junciformes* (e.g., *C. argentina* Barros and *C. austroamericana* G. Wheeler) than to *C. andina*, which differs by having elongated culms (up to 35 cm tall), several to many perigynia per spike, and a relatively broad rachilla.

While Philippi (1896), Kükenthal (1899, 1909), and Léveillé (1915) reported *Carex andina* only from central Chile, Barros (1935, 1947, 1969) reported it also from the western portion of Argentine Patagonia, citing specimens from Neuquén (*Castellanos s.n.* [BA-1892]and *O'Donell 2142* [LIL]), Chubut (*Gerling 215* [BAF]), and Santa Cruz (*Hogberg 42* [LP]) provinces. For

Table 1. A selected morphological comparison of *Carex andina* and *C. setifolia* var. *setifolia* in South America

Characters	*C. andina*	*C. setifolia* var. *setifolia*
Mouth of ventral band of leaf sheath	smooth	ciliolate
Spike shape	hemispheric to globose	ovoid
Number of female flowers/spike	10 - 40	less than 20
Perigynium shape	obovate	pyriform
Perigynium beak length (mm)	beakless (or nearly so)	0.5 - 0.8
Perigynium length (mm)	2.4 - 3.2	3 - 4.2
Rachilla shape	broadly lanceolate	setiform
Rachilla length (mm)	0.8 - 2	2.2 - 3.
Rachilla width (mm)	0.3 - 0.6	less than 0.2
Achene shape	obovate	oblong
Achene length (mm)	2.2 - 2.5	2.5 - 2.8

purposes that will become clear further below, it is also important to note here the previous reports of *C. setifolia* (s.l.) from Argentina.

Barros (1947, p. 393) reported *Carex setifolia* var. *pungens* from Neuquén Province, citing a single specimen (*Burkart 9620* [SI]) from Pino Hachado. In a later work, Barros (1969, p. 70) reported var. *setifolia* as occurring in Argentina, and, interestingly, cited the same specimens for it (*Burkart 9620*); in 1969, Barros (p. 72) wrote regarding var. *pungens*, "probablemente también en la Patagonia". Also in the same work, Barros (1969, p. 72) described a new variety of *C. setifolia*, var. *neuquensis*, from plants collected in the department of Minas in northern Neuquén Province (*Boelcke 10798* [BAB]).

However, after a thorough and careful examination of *Burkart 9620* (Fig. 3B) and *Boelcke 10798* (Fig. 3C), it is abundantly clear that each of these specimens is morphologically more similar to *C. andina* than to *C. setifolia*. Indeed, both specimens possess all of the features that characterize *C. andina* (Table 1), such as having obovate perigynia that are essentially beakless, obovate achenes, and a relatively broad, lanceolate rachilla. As such, *Burkart 9620* and *Boelcke 10798* are assignable to *C. andina*, not to *C. setifolia* (compare Fig. 3B and Fig. 3C with Figs. 2A-B and 4A-B). Although minor morphological differences do exist between the Burkart and Boelcke specimens (e.g., culm length, perigynium size and degree of pubescence, rachilla length and width; also see Fig. 3B-C), these differences are here considered to be part of the normal variation of the species. Some of the morphological variation existing among populations of *C. andina* is illustrated in Figs. 2 and 3.

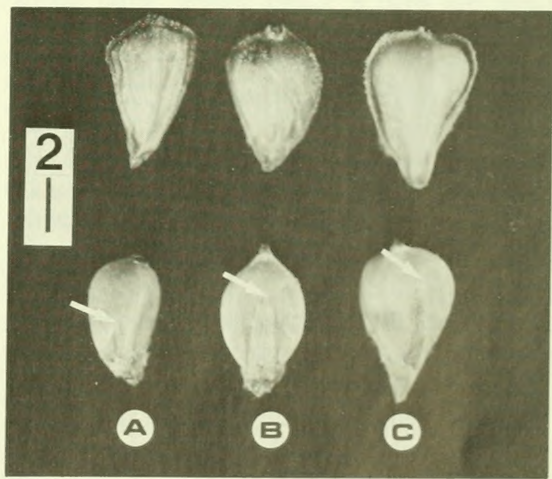


Fig. 2. *Carex andina*. Specimens from Chile. A. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *R. Philippi s.n.* (SGO-37640, syntype). B. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *R. Philippi s.n.* (SGO-46048, lectotype). C. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *Zöllner 5827* (NA). In A-C: perigynium above, achene with attached rachilla below; arrow points to apex of rachilla; bar equals 1 mm.

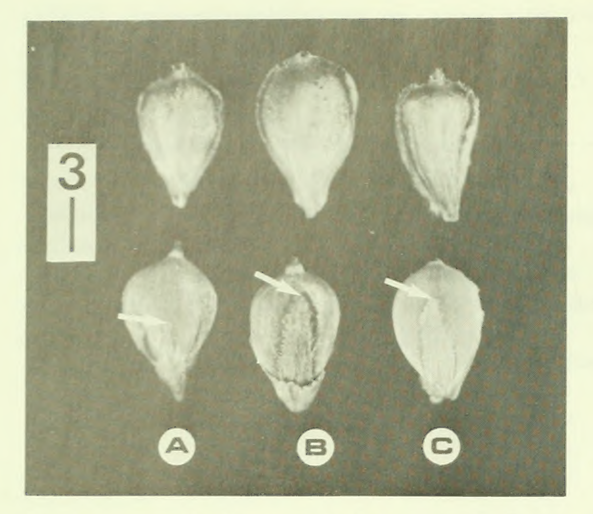


FIG. 3. *Carex andina*. Specimens from Argentina. A. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *O'Donell 2142* (LIL). B. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *Burkart 9620* (SI). C. Perigynium (ventral wiew); achene with attached rachilla (dorsal wiew); from *Boelcke 10798* (BAB). In A-C: perigynium above, achene with attached rachilla below; arrow points to apex of rachilla; bar equals 1 mm.

From the discussion above, it is evident that *Carex andina* occurs in Argentina as well as in Chile. But what is "*Carex andina*" sensu Barros (1935, 1947, 1969)? It is clear from Barros's illustrations of "*C. andina*" that more than one taxon is involved. Examination of *O'Donell 2142* (LIL), which was the specimen cited and illustrated for the species in 1947 (p. 394, Pl. 168), reveals that it is indeed referable to *C. andina* (compare Fig. 3A with Fig. 2A-B). However, the specimens illustrated for "*C. andina*" in 1935 (Fig. 22: p. 184; drawn from *Hogberg 42* [LP]) and in 1969 (Fig. 59: p. 71; drawn from *Castellanos s.n.* [BA-1892]) are not referable to *C. andina* because the perigynia of both specimens are broadly elliptical and possess a distinct beak. Although the Hogberg and Castellanos specimens have not been seen by the authors, several other specimens examined from Argentine Patagonia (i.e., from Neuquén Province southward to Santa Cruz Province) have perigynia that are essentially identical to those described above. This undescribed taxon closely resembles *C. patagonica* Speg. (sect. *Junciformes*) and is presently under study.

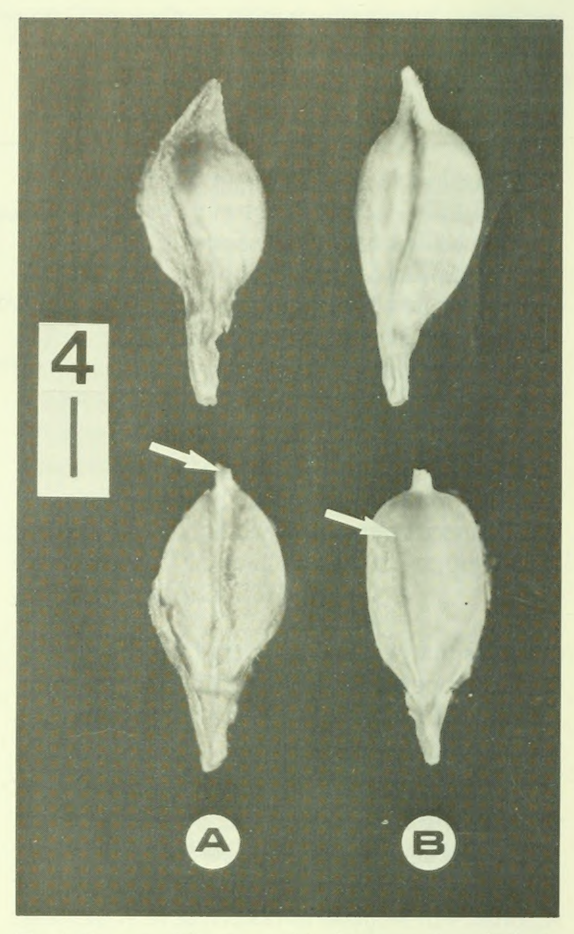


FIG. 4. *Carex setifolia* var. *setifolia*. Specimens from Chile. A. perigynium (ventral view); achene with attached rachilla (dorsal view); from *Montero 7837* (GH). B. Perigynium (ventral view); achene with attached rachilla (dorsal view); from *E. Barros 463* (GH). In A-B: perigynium above, achene with attached rachilla below; arrow points to apex of rachilla; bar equals 1 mm.

It is also important to note here that no specimen of *Carex setifolia* var. *setifolia* has been seen from Argentina. The typical variety occurs in the northern part of central Chile, particularly near the coast, and is also reported from Peru (Macbride 1936; Kükenthal 1909). It grows from near sea level to about 1800 m, where it frequents dry hillsides, washes and ravines, and sand dunes near the coast. The recognized varieties of *C. setifolia* (sensu Kükenthal 1909) grow at higher elevations in Chile, with at least one of them also occurring in Argentina.

LECTOTYPIFICATION

Carex andina was described from plants collected "Ad radicem Andium ocurrit prope Santiago, Chillán et alibi" (Philippi 1896, p. 485). Two specimens at the Museo Nacional de Historia Natural, Santiago, Chile (SGO), where Philippi's types are currently preserved, have labels annotated by Phillippi that read "*Carex andina* Ph.," SGO-37640 and SGO-46048 (Muñoz-Schick 1973). The label on the former gives "Baños de Chillán" as the locality, and the label on the latter gives "Arañas". Unfortunately, no other information is given on either label.

In selecting a lectotype, it is noteworthy that some features of SGO-37640 do not fit closely the description for *Carex andina* given in the protologue. For example, Philippi (1896, p. 485) writes "bractea brevi" and "La bráctea mayor tiene a lo sumo 18 milímetros de largo", but in SGO-37640 two of the three spikes present have bracts over 40 mm long. Furthermore, Philippi described the perigynia of *C. andina* as "mui lampiños, pero las costas algo cilioladas", but in SGO-37640 the majority of perigynia are short pubescent between the ribs. One of the authors wrote on the specimen in 1979 that it was a doubtful type because of: "bráctea inferior mayor que en la descripción original y utrículo no tan glabro" (M. Muñoz S.IV. 1979). Therefore, in our opinion SGO-37640 is a poor candidate for lectotype.

On the contrary, we believe SGO-46048 is a candidate for lectotype of *Carex andina* because (1) the specimen matches very closely the description of the species given in the protologue and (2) the specimen was definitely examined by R. A. Philippi, as evidenced by his handwriting on the label. Although "Arañas" was not cited specifically in the protologue, it corresponds to a site "ad radicem Andium prope Santiago" (33° 14'S, 70° 28' W) from where Philippi described many species. After considering all available evidence, we select SGO-46048 as lectotype for *Carex andina.*

Carex andina Philippi.
Anales Univ. Chile 93:485. 1896.
Type: Chile [Prov. Santiago], Arañas, s.d., *Philippi s.n.*
(Lectotype [here designated]: SGO-46048!)

Synonym:

Carex setifolia Kunze ex Kunth var. *neuquensis* Barros, Fl. Patag. II. p. 72., 1969.
Type: Argentina, prov. Neuquén, Dpto. Minas, 21 km. de Las Ovejas, camino a las lagunas Epulauquén, arroyo Las Bandurrias [1.250 m. 36° 55'S, 70° 56'W, 14 Jan 1964], *Boelcke 10798* (holotype: BAB!).

Carex andina occurs in central Chile and the northwestern part of Argentine Patagonia (Fig. 1). No specimen of this species has been seen from south of Cerro Otto (41° 09' S lat.) in Río Negro Province, Argentina, and reports of it from southern Patagonia (Barros 1935, 1969) are based on misidentified specimens. This transandean species grows primarily on dry and rocky slopes at elevations of about 1200-3300 m, and in some localities it extends to near the snowline. It seems to be of infrequent to occasional occurrence in both Argentina and Chile.

Representative specimens

ARGENTINA. Prov. Neuquén: Dpto. Minas, valle superior del Arroyo Atreucó, 36° 45'S, 70° 33'W, en pedregal y ladera seca, 2010-2050 m, 2 Feb. 1964, *Boelcke 11485* (partim SI); Depto. Ñorquín, Copahue, 2000 m, 25 Dec. 1944, *O'Donell 2142* (LIL); [Dpto. Picunches], Pino Hachado, 5 March 1939, *Burkart 9620* (SI); Depto. Catán-Lil, Sierra del Chachil, 29 Jan. 1965, *Rúgolo & Agrasar 412* (BAA); zwischen Estancia Pulmari und Lago Aluminé, 23 Dec. 1937, *Kalela 1590* (S); Parque Nacional Lanín, Cerro Chapelco, ladera NW, 11 Feb. 1961, *León & Calderón s.n.* (BAA-845), Prov. Río Negro: [Dpto. Bariloche], San Carlos de Bariloche, Cerro Otto, 1200 m, 10 Feb. 1934, *Parodi 11855* (BAA).

CHILE. Prov. Santiago. Río Yeso, Laguna de los Piuquenes, 2500 m, en morrena (escaso), 13 Jan. 1945, *Biese 907* (LIL); Laguna Negra, 11000 ft., near snow, 6 Feb. 1902, *Hastings 486* (UC); Prov. O'Higgins: Cordillera de Colchagua, Jan. 1930, *Pirion 164* (GH). Prov. Talca: Laguna Maule, 1500-2000 m, 4 Jan. 1972, *Zöllner 5827* (L, NA); Vilches, 500 m, 8 Jan. 1979, *Zöllner 10223* (partim CONC); El Picazo, 30 Dec. 1936, *E. Barros 467* (GH). Prov. Ñuble: Baños de Chillán, s.d., *R. Philippi* s.n. (SGO-37640--syntype).

ACKNOWLEDGMENTS

This study is based on specimens from BAA, BAB, C, CONC, GH, L, LIL, MIN, NA, S, SGO, SI, and UC; to the directors and curators of those herbaria we are very grateful for the loan of specimens.

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———————. 1969. Cyperaceae. *In*: M. N. Correa (ed.). Flora Patagónica, Parte II, Typhaceae a Orchidaceae (excepto Gramineae). Colec. Cient. Instituto Nacional de Tecnología Agropecuaria 8: 38-92. Buenos Aires.

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———————. 1910. Cyperaceae novae. I. Repert. Spec. Nov. Regni Veg. 8: 7-8.

KUNTH, C. S. 1837. Enumeratio Plantarum, II. Cyperographia synoptica. Stuttgart and Tübingen. Pp. 1-592.

KUNZE, G. 1840-51. Supplemente zu Schkuhr's Riedgräsern (Carices) oder Schkuhr's Riedgräser Neue Folge. Leipzig: (Ernst Fleischer), tab. col. 1-140.

LÉVEILLÉ, H. 1915. Les *Carex* du Chili. Revista Chilena Hist. Nat. 19: 93-117.

MACBRIDE, J. F. 1936. *Carex* in Flora of Peru. Field Mus. Nat. Hist., Bot. Ser. 13: 314-320.

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Fecha de publicación: 30 abril 1991

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ORTHOGRAPHY OF SOME EPITHETS HONORING BERTERO IN THE VASCULAR FLORA OF THE JUAN FERNANDEZ ISLANDS AND CONTINENTAL CHILE

ORTOGRAFIA DE ALGUNOS EPITETOS EN HONOR A BERTERO EN LA FLORA VASCULAR DE LAS ISLAS DE JUAN FERNANDEZ Y CHILE CONTINENTAL

Tod F. Stuessy* and Clodomiro Marticorena**

ABSTRACT

The orthography of specific epithets commemorating Carlo Giuseppe Bertero in the vascular flora of Chile is discussed, and a list is provided of accepted names.

RESUMEN

Se discute la ortografía de epítetos específicos creados en conmemoración a Carlo Giuseppe Bertero en la flora vascular de Chile, y se presenta una lista de nombres aceptados.

Because Carlo Giuseppe Bertero collected one of the earliest series of plants from the Juan Fernández Islands (Skottsberg, 1922), and another important collection from Central Chile, his name is commemorated by several epithets of plants in these floras. Commemorating a collector would seem to be a routine nomenclatural exercise, except that in this case six different epithets have been used in the Chilean flora: *berteri, berterianus, berterii, berteroanus, berteroi*, and *berteronianus*. These different usages have caused confusion. This paper attempts to reduce the confusion by (1) discussing the various latinizations that have been used to commemorate Bertero (2), recommending which forms are in best accord with the International Code of Botanical Nomenclature (ICBN; Greuter et al., 1988), and (3) providing a list of accepted names for the vascular plants of the Chilean flora.

The name, Bertero, can be latinized in four different ways: Bertero (without change from the original), Berterius (noble form), Berterus (plebian form), and Berterous (a non-Roman "latinization"). The ICBN allows specific epithets commemorating people to be either substantives in the genitive case or adjectival forms which yields eight total possible epithet forms (Table 1).

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TABLE 1. Latinization of the name "Bertero" in the formation of epithets, showing accepted forms (boldface).

Ways of Latinization of Original Name	Forms of Epithets: Substantive, Genitive Case	Forms of Epithets: Adjective
Bertero	*berteronis*	*berteronianus*
Berterius	*berterii*	*berterianus*
Berterous	***berteroi***	***berteroanus***
Berterus	*berteri*	*berteranus*

The genitive of *Bertero* is *berteronis*, and as an adjective *berteronianus*. These formations treat Bertero as a Third Declension noun, which is recommended against by the ICBN (Rec. 73C.2). *Berterius* becomes *berterii* in the genitive and *berterianus* as an adjective, both of which are not supported by the ICBN (Rec. 73C.3) because they change the stem vowel element and original spelling of the personal name from "o" to "i". *Berterus* becomes *berteri* in the genitive and *berteranus* as an adjective, both of which are also recommended against by the ICBN for the same reasons. The only acceptable epithets derive from *Berterous*, and these become *berteroi* in the genitive and *berteroanus* as an adjective. These are specifically listed as acceptable forms by the ICBN [Rec. 73C.I(c)]. Therefore, we view all the epithets *berteri, berterii, berteronis, berteranus, berterianus* and *berteronianus* as unacceptable forms to be corrected to *berteroi* or *berteroanus, —a, —um* without change of authorship.

Following is a list with comments of the specific names of vascular plants commemorating Bertero currently accepted in the flora of the Juan Fernández Islands and continental Chile (from Marticorena & Quezada, 1985) showing the cases in which the epithets are herein corrected:

Aphanes berteroana Rothm.
Aphanes berteroana Rothm., Bull. Misc. Inform. 1938: 269. 1938.

Argythamnia berteroana (Schldl.) Muell. Arg.
Chiropetalum berterianum Schldl., Linnaea 26: 637. 1855. *Argythamnia berteroana* (Schldl.) Muell. Arg., Linnaea 34: 151. 1865.

Astragalus berteroi Colla ex Savi
Astragalus berterii Colla ex Savi, Nuovo Gior. Lett., Sci. 24: 147. 1832.

Astragalus berteroanus (Moris) Reiche
Phaca berteriana Moris, Mem. Reale Accad. Sci. Torino 37: 105. 1834.
Astragalus berterianus (Moris) Reiche, Anales Univ. Chile 97: 555. 1897.

Beilschmiedia berteroana (Gay) Kosterm.
Cryptocarya [as *"Cryptocaria"*] *berteroana* Gay, Fl. Chil. 5: 301. 1851.
Beilschmiedia berteroana (Gay) Kosterm., Recueil Trav. Bot. Neerl. 35: 858. 1938.

Bromus berteroanus Colla
Bromus berterianus Colla, Mem. Reale Accad. Sci. Torino 39: 25. 1837.

Calandrinia berteroana Philippi
Calandrinia berteroana Philippi, Linnaea 28: 643. 1857.

Carex berteroana Steudel
Carex berteroniana Steudel, Flora 25(2): 604. 1842.

Dendroseris berteroana (Decne.) Hook. & Arn.
Rea berteriana Decne., Arch. Bot (Paris) 1: 513. 1833. *Dendroseris berteriana* (Decne.) Hook & Arn., Companion Bot. Mag. 1: 32. 1835.

Deschampsia berteroana (Kunth) Trin.
Trisetum berteroanum Kunth, Rev. Gramin. 457. 1831. *Deschampsia berteroana* (Kunth) Trin., Bull. Sci. Acad. Imp. Saint-Pétersbourg 1: 66. 1836.

Dicksonia berteroana (Colla) Hook.
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Oxalis berteroana Barnéoud in Gay
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Peperomia berteroana Miq.
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Pilostyles berteroi Guill.
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Polygonum berteroi Philippi
Polygonum berteroi Philippi, Linnaea 29: 38. 1858.

Potamogeton berteroanus Philippi
Potamogeton berteroanus Philippi, Linnaea 30: 200. 1859.

Pteris berteroana Agardh
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Puya berteroana Mez
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Robinsonia berteroi (DC.) Sanders, Stuessy & Marticorena, nov. comb.
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now been conserved against the earliest *Balbisia* Willd. (ICBN, Greuter et al., 1988). De Candolle's protologue (1833) did not provide a specific description but did indicate the specific name *B. berterii* (p. 333); "En donnant a cet arbuste le nom de *Balbisia Berterii* j'unis deux souvenirs chers a la science et a mon coeur". Because the genus was circumscribed by de Candolle as monotypic at that time, the generic description can be taken as a combined *descriptio generico-specifica* (ICBN Article 42.1). The names *Balbisia* and *B. berterii*, therefore, were validly published in 1833 by de Candolle. Decaisne (1834), de Candolle (1838) and Delessert (1840) all used these same generic and specific names. Baillon (1882) transferred *B. berterii* into *Vendredia* as *V. berterii* (DC.) Baillon, and Hemsley (1884), recognizing the problem of homonymy, moved the species into the monotypic genus *Rhetinodendron* Meisner (1839), a legitimate renaming of the later homonym *Balbisia* DC. A transfer of this species into *Robinsonia*, therefore, might retain the de Candolle epithet, *berterii*, but as argued above, *berteroi* is the better choice.

Rumohra berteroana (Colla) R. Rodríguez
Aspidium berterianum Colla, Mem. Reale Accad. Sci. Torino 39: 42. 1837.
Rumohra berteriana (Colla) R. Rodríguez, Bol. Soc. Biol. Concepción 45: 150. 1972.

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Cynoglossum berteri Colla, Mem. Reale Accad. Sci. Torino 38: 132. 1835.
Selkirkia berteroi (Colla) Hemsley, Rep. Challenger, Bot. 1(3): 48. 1884.

Triptilion berteroi Philippi
Triptilion [as "Triptilium"] *berteroi* Philippi, Anales Univ. Chile 87: 91. 1894.

Urtica berteroana Philippi
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Verbena berteroi (Meisner) Schauer
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Verbena berterii (Meisner) Schauer in DC., Prodr. 11: 551. 1847.

Vicia berteroana Philippi
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Wahlenbergia berteroi Hook. & Arn.
Wahlenbergia berteroi Hook. & Arn., J. Bot. (Hooker) 1: 279. 1834.

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RYTIDOSPERMA PASCHALIS (PILGER) BAEZA, UNA NUEVA COMBINACION PARA LA FLORA AGROSTOLOGICA DE CHILE*

RYTIDOSPERMA PASCHALIS *(PILGER) BAEZA, A NEW COMBINATION FOR THE AGROSTOLOGICAL FLORA OF CHILE*

Marcelo Baeza P.**

RESUMEN

Se transfiere la especie *Danthonia paschalis* Pilger (Poaceae) al género *Rytidosperma* Steud., proponiendo la nueva combinación: *Rytidosperma paschalis* (Pilger) Baeza.

ABSTRACT

Danthonia paschalis Pilger (Poaceae) is transferred to *Rytidosperma* Steud. A new combination, *Rytidosperma paschalis* (Pilger) Baeza, is proposed.

KEYWORDS: *Rytidosperma*, Poaceae, Chile.

INTRODUCCION

En 1973 Nicora rehabilitó el género *Rytidosperma* Steud. (1853-1854) sobre la base de material de *Danthonia* DC. de Argentina y Chile. Según esto, *Rytidosperma* difiere de *Danthonia*, entre otros caracteres, por el callo muy corto y por presentar en la lema haces de pelos agrupados en fascículos dispuestos transversalmente.

Estas diferencias ya habían sido visualizadas por E. Desvaux (1854: 360; 363) al considerar dos secciones para *Danthonia:*

I Callus (base coriácea de la palleta inferior) alargado, decurrente, envolviendo enteramente cada artículo del raquis y pareciendo constituirlo. Pelos situados sobre los bordes de la palleta.

II Callus (base coriácea de la palleta inferior) muy corto, artículos del raquis de la flor visibles. Pelos dispuestos por series circulares.

De esta manera, Nicora (1973) concluyó que las especies de *Danthonia* que presentan las características de la sección II deben agruparse en el género *Rytidosperma*, y cita para nuestro pais cuatro especies de este género. El examen de material de herbario de *Danthonia paschalis* (M.

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Etienne s.n.) demuestra que los caracteres del callo, lema y lodículas corresponden perfectamente al género *Rytidosperma*, por lo cual se propone la siguiente nueva combinación:

Rytidosperma paschalis (Pilger) Baeza, comb. nov.

Basiónimo: *Danthonia paschalis* Pilger *in* Skottsberg. Nat. Hist. J. Fernandez and Easter Island 2: 67, lám. 1, d-h. 1922. Typus: C. & I. SKOTTSBERG 658, Isla de Pascua, on the slope of Mt. Katiki (B).

Icones: Etienne & Faúndez, Ci. Agric. (Univ. Chile) 12: 25. 1983.

Planta perenne, con tallos de 10 cm de alto, pubescentes; glumas subiguales, glabras, verde claras, notoriamente venosas; callo piloso, corto; lema membranácea, aristada, bilobada, verde brillante, con fascículos pilosos en la base y un fascículo de pelos largos a ambos lados de los bordes involutados, en la parte media; pálea membranácea; lodículas dos, con pelos largos que nacen del borde superior.

Distribución

Especie endémica de Isla de Pascua. Fue encontrada en una sola oportunidad por Skottsberg en 1917 en el Monte Katiki. Posteriormente, Etienne la colectó en tres lugares en el interior del cráter del volcán Rano Kao.

Material estudiado

Isla de Pascua. Abhang des Katiki, 16-VI-1917, C. & I. Skottsberg 658 (Fototypus-CONC); Isla de Pascua. Rano Kao (interior del cráter), 200 m s.m., VI-1981, M. Etienne s.n. (CONC); Isla de Pascua. Volcán Rano Kao, 2-V-1988, G. Zizka 490 (SGO).

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CONTRIBUCION A LA ESTADISTICA DE LA FLORA VASCULAR DE CHILE

CONTRIBUTION TO THE STATISTICS OF THE VASCULAR FLORA OF CHILE

Clodomiro Marticorena*

RESUMEN

Se da a conocer diversa información sobre las floras vasculares de Chile continental, Archipiélago de Juan Fernández, Islas Desventuradas e Isla de Pascua. Para cada flora se indica en forma tabulada el número de familias de cada división o clase, número de especies y de taxa infraespecíficos, número de endémicas, nativas y adventicias, porcentaje de cada familia dentro de cada división o clase y en el total de la flora, porcentaje de cada género dentro de cada familia y de cada división o clase, resúmenes numéricos de la flora de cada territorio, familias y géneros endémicos, y familias y géneros de mayor tamaño.

ABSTRACT

Varied information on the vascular floras of continental Chile, Archipelago of Juan Fernández, Islas Desventuradas, and Easter Island is presented. For each flora the number of families in each division or class is given. Also, the number of species and infraspecific taxa, number and percentage of endemics, natives and adventives is summarized. Finally, percentage of each family within each division or class and in the whole flora, percentage of each genus within each family, division or class, numeric summaries of the flora of each territory, endemic families and genera, and largest families and genera are tabulated.

KEYWORDS: Flora of Chile, flora of Juan Fernández, flora of Islas Desventuradas, flora of Easter Island, endemics, natives, adventives.

INTRODUCCION

Tal como estaba previsto, inmediatamente después de la publicación del Catálogo de la flora vascular de Chile (Marticorena y Quezada, Gayana, Bot. 41(1-2):1-157. 1985) comenzaron a aparecer nuevos cambios en la taxonomía de las plantas chilenas, al mismo tiempo que se observó la necesidad de hacer diversas correcciones. Para iniciar una reactualización, en un principio se creó un archivo en un procesador de palabras, en el que se fueron haciendo periódicamente las adiciones y correcciones; al poco tiempo se hizo evidente que este método no era práctico y se decidió crear una nueva versión del Catálogo que pudiera ser actualizada en forma más eficiente. Para esto se crearon varios archivos en un microcomputador, usando una de las bases de datos comerciales de amplio uso.

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La versión original del Catálogo presenta a las plantas de Chile como una unidad en la que están mezcladas las plantas de Chile continental e insular. En la nueva versión las plantas se han separado en cuatro archivos correspondientes a Chile continental, Archipiélago de Juan Fernández, Islas Desventuradas e Isla de Pascua. En cada archivo a cada especie o taxón infraespecífico se ha agregado la condición (endémica, nativa, adventicia), y su presencia o ausencia en los otros tres territorios. Esta nueva estructura permite hacer rápidas comparaciones entre las floras, conocer qué géneros y/o especies son compartidas entre los territorios, número y porcentaje de familias, géneros y especies, número y porcentaje de endémicas, nativas y adventicias, combinaciones de estas condiciones, y extraer mucha otra información.

Es poco probable que la nueva versión sea publicada en un futuro cercano, pero se publica ahora la información numérica, considerando que puede ser de utilidad.

A partir de los cuatro archivos básicos se ha generado, para cada territorio, otro archivo de géneros, que contiene la familia, número total de taxa específicos e infraespecíficos, de especies, de taxa infraespecíficos, de endémicas, de nativas y de adventicias. A su vez, de estos archivos se han generado los que se incluyen en este trabajo. Cuando en un género sólo existe un taxón y éste es de rango infraespecífico, se ha contado como especie.

La suma de los taxa de Chile continental (CC), Juan Fernández (JF), Islas Desventuradas (ID) e Isla de Pascua (IP) no representa el total de todas las plantas de la flora de Chile, ya que muchas especies son compartidas entre estos cuatro territorios. El número de especies compartidas es el siguiente:

	CC JF	CC ID	CC IP	JF ID	JF IP	ID IP
PTERI	31	0	1	0	0	0
DICOT	145	12	38	8	22	3
MONOC	50	1	16	0	4	0
Total	226	13	55	8	26	3

En muchos casos la mayoría de estas especies son adventicias en ambos territorios, salvo en las Pteridophyta compartidas entre Chile continental y Juan Fernández, en que la mayoría son nativas. Cuando se trata de separar el número en nativas y adventicias, puede suceder que no haya coincidencia entre el número de uno y otro territorio; esto se debe a que algunas especies endémicas en un territorio pueden ser adventicias en otro (p. ej. *Lardizabala biternata* es endémica en Chile continental y adventicia en Juan Fernández).

El número real de especies más taxa infraespecíficos de la flora total de Chile es el siguiente:

	NT	%
PTERI	167	2.80
GYMNO	16	0.27
DICOT	4569	76.52
MONOC	1219	20.42
Total	5971	100.00

Los archivos son modificados constantemente, a medida que va apareciendo nueva información. Para algunas especies, en su mayoría *Cyperaceae, Gramineae* y *Juncaceae*, ha sido especialmente difícil determinar si son nativas o adventicias y éste es un punto que puede sufrir algunos cambios.

En las listas se han usado las siguientes abreviaturas:

NG: Número de géneros.
GE: Número de géneros endémicos.
NT: Número de taxa (NS + NI; EN + NA + AD).
NS: Número de especies.
NI: Número de taxa infraespecíficos.
EN: Número de endémicas.
NA: Número de nativas (crecen también en otros paises).
AD: Número de adventicias.
%D: En las listas de familias, porcentaje que ocupa la familia dentro de la división o clase; por ejemplo, Adiantaceae ocupa el 20.16% de Pteridophyta. En las listas de géneros, porcentaje que ocupa el género dentro de la división o clase; por ejemplo, *Adiantum* ocupa el 6.45% de Pteridophyta.
%F: En las listas de familias, porcentaje que ocupa la familia dentro de la flora del territorio; ejemplo, Adiantaceae ocupa el 0.44% de la flora de Chile continental. En las listas de géneros, porcentaje que ocupa el género dentro de la familia; por ejemplo, *Adiantum* ocupa el 32% de Adiantaceae. En los resúmenes, porcentaje que ocupa la división o clase dentro de la flora del territorio; por ejemplo, Pteridophyta ocupa el 2.16% de la flora de Chile continental.

(E): Familia o género endémico.
(e): Género endémico en la flora total de Chile, pero presente en dos territorios; no contabilizado en los resúmenes.

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ESTADISTICA DE LA FLORA VASCULAR DE CHILE CONTINENTAL: FAMILIAS

PTERIDOPHYTA

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ADIANT	7	0	25	24	1	5	19	1	20.16	0.44
ASPLEN	2	0	8	8	0	1	7	0	6.45	0.14
BLECHN	1	0	10	10	0	4	6	0	8.06	0.17
DENNST	3	0	3	3	0	0	3	0	2.42	0.05
DRYOPT	7	0	16	13	3	4	11	1	12.90	0.28
EQUISE	1	0	2	2	0	0	2	0	1.61	0.03
GLEICH	1	0	5	4	1	2	3	0	4.03	0.09
HYMENO	4	0	25	21	4	0	25	0	20.16	0.44
ISOETA	1	0	1	1	0	0	1	0	0.81	0.02
LOPHOS	1	0	1	1	0	0	1	0	0.81	0.02
LYCOPO	2	0	7	7	0	1	6	0	5.65	0.12
MARSIL	2	0	2	2	0	0	2	0	1.61	0.03
OPHIOG	2	0	6	6	0	1	5	0	4.84	0.10
POLYPO	3	0	8	7	1	1	7	0	6.45	0.14
SALVIN	2	0	2	2	0	0	1	1	1.61	0.03
SCHIZA	1	0	1	1	0	0	1	0	0.81	0.02
SELAGI	1	0	1	1	0	0	0	1	0.81	0.02
THELYP	1	0	1	1	0	0	1	0	0.81	0.02
Total	42	0	124	114	10	19	101	4	100.00	2.16

GYMNOSPERMAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ARAUCA	1	0	1	1	0	0	1	0	6.25	0.02
CUPRES	3	0	3	3	0	0	3	0	18.75	0.05
EPHEDR	1	0	7	7	0	2	5	0	43.75	0.12
PODOCA	4	1	5	5	0	3	2	0	31.25	0.09
Total	9	1	16	16	0	5	11	0	100.00	0.28

DICOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ACANTH	2	0	2	2	0	1	1	0	0.05	0.03
AEXTOX	1	0	1	1	0	0	1	0	0.02	0.02
AIZOAC	3	0	13	12	1	6	5	2	0.29	0.23
AMARAN	3	0	9	9	0	2	4	3	0.20	0.16
ANACAR	3	0	14	11	3	7	7	0	0.32	0.24
APOCYN	3	0	4	4	0	1	1	2	0.09	0.07
ARALIA	1	0	2	2	0	1	1	0	0.05	0.03
ARISTO	1	0	2	2	0	2	0	0	0.05	0.03
ASCLEP	7	0	17	16	1	14	2	1	0.39	0.30
BALANO	1	0	1	1	0	0	1	0	0.02	0.02
BERBER	1	0	52	47	5	37	15	0	1.18	0.91
BETULA	1	0	1	1	0	0	0	1	0.02	0.02
BIGNON	4	0	15	14	1	9	6	0	0.34	0.26
BORAGI	14	0	116	112	4	69	29	18	2.63	2.02
BUDDLE	1	0	2	2	0	1	1	0	0.05	0.03
CACTAC	21	2	250	154	96	236	14	0	5.66	4.36
CAESAL	5	1	27	23	4	14	11	2	0.61	0.47
CALLIT	1	0	5	5	0	0	5	0	0.11	0.09
CALYCE	5	0	49	34	15	15	34	0	1.11	0.85
CAMPAN	8	1	32	18	14	24	8	0	0.72	0.56
CAPPAR	1	0	2	1	1	1	1	0	0.05	0.03
CAPRIF	1	0	1	1	0	0	0	1	0.02	0.02
CARICA	1	0	1	1	0	1	0	0	0.02	0.02
CARYOP	26	1	103	92	11	36	40	27	2.33	1.79
CELAST	1	0	4	4	0	0	4	0	0.09	0.07
CERATO	1	0	1	1	0	0	1	0	0.02	0.02
CHENOP	7	0	56	54	2	14	26	16	1.27	0.98
COMPOS	153	9	1033	927	106	441	502	90	23.40	18.00
CONVOL	6	0	18	13	5	1	13	4	0.41	0.31
CORIAR	1	0	1	1	0	0	1	0	0.02	0.02
CORNAC	1	0	4	4	0	3	1	0	0.09	0.07
CRASSU	2	0	8	8	0	2	5	1	0.18	0.14
CRUCIF	40	3	222	191	31	93	97	32	5.03	3.87
CUCURB	1	0	1	1	0	0	1	0	0.02	0.02
CUNONI	2	0	2	2	0	0	2	0	0.05	0.03
CUSCUT	1	0	11	10	1	2	9	0	0.25	0.19
DESFON	1	0	1	1	0	0	1	0	0.02	0.02
DIPSAC	3	0	3	3	0	0	0	3	0.07	0.05
DONATI	1	0	1	1	0	0	1	0	0.02	0.02
DROSER	1	0	1	1	0	0	1	0	0.02	0.02
ELAEOC	2	0	3	3	0	2	1	0	0.07	0.05
ELATIN	1	0	1	1	0	0	1	0	0.02	0.02
EMPETR	1	0	1	1	0	0	1	0	0.02	0.02
EPACRI	1	0	1	1	0	0	1	0	0.02	0.02
EREMOL	2	0	2	2	0	2	0	0	0.05	0.03
ERICAC	2	0	16	10	6	2	14	0	0.36	0.28
EUCRYP	1	0	2	2	0	1	1	0	0.05	0.03
EUPHOR	9	2	45	43	2	25	8	12	1.02	0.78
FAGACE	1	0	11	10	1	5	6	0	0.25	0.19
FLACOU	2	0	9	9	0	6	3	0	0.20	0.16
FRANKE	1	0	4	4	0	1	3	0	0.09	0.07
FUMARI	1	0	4	4	0	0	0	4	0.09	0.07
GENTIA	4	0	13	13	0	6	5	2	0.29	0.23
GERANI	2	0	28	26	2	12	5	11	0.63	0.49
GESNER	3	1	3	3	0	1	2	0	0.07	0.05
GOMORT (E)	1	1	1	1	0	1	0	0	0.02	0.02
GOODEN	1	0	1	1	0	0	1	0	0.02	0.02
GUNNER	1	0	7	7	0	4	3	0	0.16	0.12
GUTTIF	1	0	5	5	0	1	1	3	0.11	0.09
HALORA	1	0	2	2	0	0	2	0	0.05	0.03
HIPPUR	1	0	1	1	0	0	1	0	0.02	0.02
HYDRAN	1	0	1	1	0	0	1	0	0.02	0.02
HYDROP	2	0	8	8	0	1	7	0	0.18	0.14
ICACIN	1	0	1	1	0	1	0	0	0.02	0.02
KRAMER	1	0	2	2	0	1	1	0	0.05	0.03
LABIAT	15	0	40	40	0	18	10	12	0.91	0.70
LARDIZ	2	1	2	2	0	1	1	0	0.05	0.03
LAURAC	3	0	5	5	0	4	1	0	0.11	0.09
LEDOCA	2	0	4	4	0	3	1	0	0.09	0.07

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
LENTIB	2	0	3	3	0	0	3	0	0.07	0.05
LINACE	2	0	9	8	1	5	2	2	0.20	0.16
LOASAC	4	1	78	67	11	52	26	0	1.77	1.36
LORANT	4	2	6	6	0	3	3	0	0.14	0.10
LYTHRA	3	0	11	8	3	6	0	5	0.25	0.19
MALESH	1	0	25	18	7	24	1	0	0.57	0.44
MALPIG	2	2	2	2	0	2	0	0	0.05	0.03
MALVAC	16	0	132	126	6	77	44	11	2.99	2.30
MIMOSA	3	0	15	15	0	3	5	7	0.34	0.26
MISODE	1	0	9	8	1	1	8	0	0.20	0.16
MOLLUG	2	0	2	2	0	0	1	1	0.05	0.03
MONIMI	3	1	3	3	0	2	1	0	0.07	0.05
MYRICA	1	0	1	1	0	0	1	0	0.02	0.02
MYRTAC	9	1	24	23	1	15	9	0	0.54	0.42
NOLANA	2	1	43	43	0	40	3	0	0.97	0.75
NYCTAG	3	0	7	7	0	1	6	0	0.16	0.12
NYMPHA	1	0	1	1	0	0	0	1	0.02	0.02
OLEACE	1	0	1	1	0	0	1	0	0.02	0.02
ONAGRA	8	0	44	40	4	8	31	5	1.00	0.77
OROBAN	1	0	4	4	0	1	1	2	0.09	0.07
OXALID	1	0	128	119	9	88	38	2	2.90	2.23
PAPAVE	3	0	6	6	0	3	1	2	0.14	0.10
PAPILI	29	0	321	309	12	152	107	62	7.27	5.59
PASSIF	1	0	2	2	0	0	1	1	0.05	0.03
PHYTOL	3	2	5	5	0	4	1	0	0.11	0.09
PIPERA	1	0	4	4	0	3	1	0	0.09	0.07
PLANTA	2	0	27	23	4	6	17	4	0.61	0.47
PLUMBA	3	0	4	4	0	2	2	0	0.09	0.07
POLEMO	7	0	11	11	0	2	9	0	0.25	0.19
POLYGA	2	0	12	12	0	9	3	0	0.27	0.21
POLYGO	9	0	62	57	5	34	9	19	1.40	1.08
PORTUL	6	0	78	73	5	46	31	1	1.77	1.36
PRIMUL	6	0	14	11	3	2	10	2	0.32	0.24
PROTEA	4	0	6	6	0	1	5	0	0.14	0.10
RAFFLE	1	0	1	1	0	0	1	0	0.02	0.02
RANUNC	8	0	47	42	5	4	36	7	1.06	0.82
RESEDA	1	0	1	1	0	0	0	1	0.02	0.02
RHAMNA	7	1	17	16	1	10	7	0	0.39	0.30
ROSACE	15	0	55	51	4	11	31	13	1.25	0.96
RUBIAC	9	0	44	39	5	18	19	7	1.00	0.77
RUTACE	2	1	3	3	0	1	0	2	0.07	0.05
SALICA	2	0	3	3	0	0	1	2	0.07	0.05
SANTAL	4	0	22	21	1	14	8	0	0.50	0.38
SAPIND	4	1	4	4	0	1	2	1	0.09	0.07
SAPOTA	1	0	1	1	0	1	0	0	0.02	0.02
SAXIFR	11	3	51	37	14	26	24	1	1.16	0.89
SCROPH	30	0	182	161	21	95	63	24	4.12	3.17
SIMARO	1	0	1	1	0	0	0	1	0.02	0.02
SOLANA	25	3	157	135	22	67	78	12	3.56	2.74
STERCU	1	0	1	1	0	0	0	1	0.02	0.02
STYLID	1	0	1	1	0	0	1	0	0.02	0.02
TETRAC	1	0	1	1	0	0	1	0	0.02	0.02
THYMEL	2	0	3	3	0	1	2	0	0.07	0.05
TROPAE	1	0	18	18	0	15	2	1	0.41	0.31
UMBELL	33	1	108	106	2	41	52	15	2.45	1.88
URTICA	4	0	16	13	3	3	10	3	0.36	0.28
VALERI	4	0	47	47	0	30	15	2	1.06	0.82
VERBEN	12	0	98	82	16	42	51	5	2.22	1.71
VIOLAC	2	0	101	74	27	70	28	3	2.29	1.76
VITACE	1	0	1	1	0	0	1	0	0.02	0.02
VIVIAN	3	2	5	5	0	4	1	0	0.11	0.09
WINTER	1	0	3	1	2	0	3	0	0.07	0.05
ZYGOPH	7	2	11	10	1	5	5	1	0.25	0.19
Total	743	46	4414	3906	508	2182	1756	476	100.00	76.93

MONOCOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ALISMA	2	0	2	2	0	1	1	0	0.17	0.03
AMARYL	10	3	92	81	11	80	12	0	7.76	1.60
APONOG	1	0	1	1	0	0	0	1	0.08	0.02
ARACEA	1	0	1	1	0	0	0	1	0.08	0.02
BROMEL	6	1	25	21	4	21	4	0	2.11	0.44
CENTRO	1	0	1	1	0	0	1	0	0.08	0.02
COMMEL	1	0	1	1	0	0	0	1	0.08	0.02
CORSIA	1	0	1	1	0	0	1	0	0.08	0.02
CYPERA	10	0	175	138	37	32	129	14	14.77	3.05
DIOSCO	2	1	49	44	5	48	1	0	4.14	0.85
GRAMIN	109	1	595	561	34	131	313	151	50.21	10.37
HYDROC	3	0	4	4	0	0	1	3	0.34	0.07
IRIDAC	11	1	38	29	9	18	19	1	3.21	0.66
JUNCAC	7	0	53	42	11	7	46	0	4.47	0.92
JUNCAG	2	0	4	4	0	0	4	0	0.34	0.07
LEMNAC	3	0	6	6	0	0	6	0	0.51	0.10
LILAEA	1	0	1	1	0	0	1	0	0.08	0.02
LILIAC	21	8	50	47	3	38	9	3	4.22	0.87
LIMNOC	1	0	1	1	0	0	0	1	0.08	0.02
ORCHID	7	0	47	46	1	27	20	0	3.97	0.82
PALMAE	1	1	1	1	0	1	0	0	0.08	0.02
PHILES	3	1	5	5	0	2	3	0	0.42	0.09
PONTED	1	0	1	1	0	0	0	1	0.08	0.02
POTAMO	1	0	9	9	0	1	8	0	0.76	0.16
RESTIO	1	0	1	1	0	1	0	0	0.08	0.02
RUPPIA	1	0	2	2	0	1	1	0	0.17	0.03
TECOPH	3	3	15	14	1	15	0	0	1.27	0.26
TYPHAC	1	0	2	2	0	0	2	0	0.17	0.03
ZANNIC	1	0	1	1	0	0	1	0	0.08	0.02
ZOSTER	1	0	1	1	0	0	1	0	0.08	0.02
Total	214	20	1185	1069	116	424	584	177	100.00	20.66

ESTADISTICA DE LA FLORA DE CHILE CONTINENTAL

PTERIDOPHYTA: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ADIANTACEAE								
Adiantum	8	7	1	4	3	1	32.00	6.45
Cheilanthes	9	9	0	0	9	0	36.00	7.26
Cryptogramma	1	1	0	0	1	0	4.00	0.81
Notholaena	2	2	0	0	2	0	8.00	1.61
Pellaea	2	2	0	1	1	0	8.00	1.61
Pteris	2	2	0	0	2	0	8.00	1.61
Trismeria	1	1	0	0	1	0	4.00	0.81
Subtotal	25	24	1	5	19	1	100.00	20.16
ASPLENIACEAE								
Asplenium	7	7	0	1	6	0	87.50	5.65
Pleurosorus	1	1	0	0	1	0	12.50	0.81
Subtotal	8	8	0	1	7	0	100.00	6.46
BLECHNACEAE								
Blechnum	10	10	0	4	6	0	100.00	8.06
Subtotal	10	10	0	4	6	0	100.00	8.06

	NT	NS	NI	EN	NA	AD	%F	%D
DENNSTAEDTIACEAE								
Dennstaedtia	1	1	0	0	1	0	33.33	0.81
Histiopteris	1	1	0	0	1	0	33.33	0.81
Hypolepis	1	1	0	0	1	0	33.33	0.81
Subtotal	3	3	0	0	3	0	100.00	2.43
DRYOPTERIDACEAE								
Cystopteris	1	1	0	0	1	0	6.25	0.81
Dryopteris	1	1	0	0	0	1	6.25	0.81
Elaphoglossum	3	3	0	1	2	0	18.75	2.42
Megalastrum	2	1	1	2	0	0	12.50	1.61
Polystichum	7	5	2	1	6	0	43.75	5.65
Rumohra	1	1	0	0	1	0	6.25	0.81
Woodsia	1	1	0	0	1	0	6.25	0.81
Subtotal	16	13	3	4	11	1	100.00	12.92
EQUISETACEAE								
Equisetum	2	2	0	0	2	0	100.00	1.61
Subtotal	2	2	0	0	2	0	100.00	1.61
GLEICHENIACEAE								
Gleichenia	5	4	1	2	3	0	100.00	4.03
Subtotal	5	4	1	2	3	0	100.00	4.03
HYMENOPHYLLACEAE								
Hymenoglossum (e)	1	1	0	0	1	0	4.00	0.81
Hymenophyllum	22	18	4	0	22	0	88.00	17.74
Serpyllopsis	1	1	0	0	1	0	4.00	0.81
Trichomanes	1	1	0	0	1	0	4.00	0.81
Subtotal	25	21	4	0	25	0	100.00	20.17
ISOETACEAE								
Isoetes	1	1	0	0	1	0	100.00	0.81
Subtotal	1	1	0	0	1	0	100.00	0.81
LOPHOSORIACEAE								
Lophosoria	1	1	0	0	1	0	100.00	0.81
Subtotal	1	1	0	0	1	0	100.00	0.81
LYCOPODIACEAE								
Huperzia	1	1	0	1	0	0	14.29	0.81
Lycopodium	6	6	0	0	6	0	85.71	4.84
Subtotal	7	7	0	1	6	0	100.00	5.65
MARSILEACEAE								
Marsilea	1	1	0	0	1	0	50.00	0.81
Pilularia	1	1	0	0	1	0	50.00	0.81
Subtotal	2	2	0	0	2	0	100.00	1.62
OPHIOGLOSSACEAE								
Botrychium	2	2	0	0	2	0	33.33	1.61
Ophioglossum	4	4	0	1	3	0	66.67	3.23
Subtotal	6	6	0	1	5	0	100.00	4.84
POLYPODIACEAE								
Grammitis	3	3	0	0	3	0	37.50	2.42
Pleopeltis	1	1	0	0	1	0	12.50	0.81
Polypodium	4	3	1	1	3	0	50.00	3.23
Subtotal	8	7	1	1	7	0	100.00	6.46
SALVINIACEAE								
Azolla	1	1	0	0	1	0	50.00	0.81
Salvinia	1	1	0	0	0	1	50.00	0.81
Subtotal	2	2	0	0	1	1	100.00	1.62
SCHIZAEACEAE								
Schizaea	1	1	0	0	1	0	100.00	0.81
Subtotal	1	1	0	0	1	0	100.00	0.81
SELAGINELLACEAE								
Selaginella	1	1	0	0	0	1	100.00	0.81
Subtotal	1	1	0	0	0	1	100.00	0.81
THELYPTERIDACEAE								
Thelypteris	1	1	0	0	1	0	100.00	0.81
Subtotal	1	1	0	0	1	0	100.00	0.81
Total	124	114	10	19	101	4		100.8

GYMNOSPERMAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ARAUCARIACEAE								
Araucaria	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25
CUPRESSACEAE								
Austrocedrus	1	1	0	0	1	0	33.33	6.25
Fitzroya	1	1	0	0	1	0	33.33	6.25
Pilgerodendron	1	1	0	0	1	0	33.33	6.25
Subtotal	3	3	0	0	3	0	100.00	18.75
EPHEDRACEAE								
Ephedra	7	7	0	2	5	0	100.00	43.75
Subtotal	7	7	0	2	5	0	100.00	43.75
PODOCARPACEAE								
Lepidothamnus (E)	1	1	0	1	0	0	20.00	6.25
Podocarpus	2	2	0	1	1	0	40.00	12.50
Prumnopytis	1	1	0	1	0	0	20.00	6.25
Saxe-Gothaea	1	1	0	0	1	0	20.00	6.25
Subtotal	5	5	0	3	2	0	100.00	31.25
Total	16	16	0	5	11	0		100.00

DICOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ACANTHACEAE								
Dicliptera	1	1	0	1	0	0	50.00	0.02
Stenandrium	1	1	0	0	1	0	50.00	0.02
Subtotal	2	2	0	1	1	0	100.00	0.04
AEXTOXICACEAE								
Aextoxicon	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
AIZOACEAE								
Carpobrotus	1	1	0	0	1	0	7.69	0.02
Mesembryanthemum	1	1	0	0	0	1	7.69	0.02
Tetragonia	11	10	1	6	4	1	84.62	0.25
Subtotal	13	12	1	6	5	2	100.00	0.29
AMARANTHACEAE								
Alternanthera	2	2	0	1	1	0	22.22	0.05
Amaranthus	5	5	0	1	1	3	55.56	0.11
Gomphrena	2	2	0	0	2	0	22.22	0.05
Subtotal	9	9	0	2	4	3	100.00	0.21
ANACARDIACEAE								
Haplorhus	1	1	0	0	1	0	7.14	0.02
Lithrea	1	1	0	1	0	0	7.14	0.02
Schinus	12	9	3	6	6	0	85.71	0.27
Subtotal	14	11	3	7	7	0	100.00	0.31
APOCYNACEAE								
Elytropus	1	1	0	0	1	0	25.00	0.02
Skytanthus	1	1	0	1	0	0	25.00	0.02
Vinca	2	2	0	0	0	2	50.00	0.05
Subtotal	4	4	0	1	1	2	100.00	0.09
ARALIACEAE								
Pseudopanax	2	2	0	1	1	0	100.00	0.05
Subtotal	2	2	0	1	1	0	100.00	0.05
ARISTOLOCHIACEAE								
Aristolochia	2	2	0	2	0	0	100.00	0.05
Subtotal	2	2	0	2	0	0	100.00	0.05
ASCLEPIADACEAE								
Aphanostelma	1	1	0	0	1	0	5.88	0.02
Asclepias	1	1	0	0	0	1	5.88	0.02
Astephanus	1	1	0	1	0	0	5.88	0.02
Cynanchum	10	9	1	9	1	0	58.82	0.23
Diplolepis	1	1	0	1	0	0	5.88	0.02
Philibertia	1	1	0	1	0	0	5.88	0.02
Tweedia	2	2	0	2	0	0	11.76	0.05
Subtotal	17	16	1	14	2	1	100.00	0.38
BALANOPHORACEAE								
Ombrophytum	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02

	NT	NS	NI	EN	NA	AD	%F	%D
BERBERIDACEAE								
Berberis	52	47	5	37	15	0	100.00	1.18
Subtotal	52	47	5	37	15	0	100.00	1.18
BETULACEAE								
Alnus	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
BIGNONIACEAE								
Argylia	12	11	1	9	3	0	80.00	0.27
Campsidium	1	1	0	0	1	0	6.67	0.02
Eccremocarpus	1	1	0	0	1	0	6.67	0.02
Tecoma	1	1	0	0	1	0	6.67	0.02
Subtotal	15	14	1	9	6	0	100.00	0.33
BORAGINACEAE								
Amsinckia	2	2	0	0	2	0	1.72	0.05
Anchusa	1	1	0	0	0	1	0.86	0.02
Asperugo	1	1	0	0	0	1	0.86	0.02
Borago	1	1	0	0	0	1	0.86	0.02
Cordia	1	1	0	1	0	0	0.86	0.02
Cryptantha	40	39	1	32	8	0	34.48	0.91
Cynoglossum	4	4	0	1	0	3	3.45	0.09
Echium	2	2	0	0	0	2	1.72	0.05
Heliotropium	27	26	1	20	5	2	23.28	0.61
Myosotis	9	8	1	0	2	7	7.76	0.20
Omphalodes	1	1	0	0	0	1	0.86	0.02
Pectocarya	5	4	1	1	4	0	4.31	0.11
Plagiobothrys	17	17	0	13	4	0	14.66	0.39
Tiquilia	5	5	0	1	4	0	4.31	0.11
Subtotal	116	112	4	69	29	18	100.00	2.62
BUDDLEJACEAE								
Buddleja	2	2	0	1	1	0	100.00	0.05
Subtotal	2	2	0	1	1	0	100.00	0.05
CACTACEAE								
Acanthocalycium	1	1	0	0	1	0	0.40	0.02
Arequipa	5	4	1	3	2	0	2.00	0.11
Austrocactus	1	1	0	1	0	0	0.40	0.02
Austrocylindropuntia	2	1	1	2	0	0	0.80	0.05
Browningia	1	1	0	0	1	0	0.40	0.02
Copiapoa (E)	50	40	10	50	0	0	20.00	1.13
Corryocactus	2	2	0	1	1	0	0.80	0.05
Erdisia	2	2	0	2	0	0	0.80	0.05
Eriosyce (E)	7	6	1	7	0	0	2.80	0.16
Eulychnia	7	7	0	7	0	0	2.80	0.16
Haageocereus	1	1	0	0	1	0	0.40	0.02
Helianthocereus	1	1	0	1	0	0	0.40	0.02
Maihuenia	1	1	0	1	0	0	0.40	0.02
Neoporteria	133	57	76	133	0	0	53.20	3.01
Neowerdermannia	1	1	0	1	0	0	0.40	0.02
Opuntia	1	1	0	0	1	0	0.40	0.02
Oreocereus	2	2	0	1	1	0	0.80	0.05
Reicheocactus	1	1	0	1	0	0	0.40	0.02
Soehrensia	1	1	0	1	0	0	0.40	0.02
Tephrocactus	18	15	3	12	6	0	7.20	0.41
Trichocereus	12	8	4	12	0	0	4.80	0.27
Subtotal	250	154	96	236	14	0	100.00	5.65

	NT	NS	NI	EN	NA	AD	%F	%D
CAESALPINIACEAE								
Balsamocarpon (E)	1	1	0	1	0	0	3.70	0.02
Caesalpinia	4	4	0	2	1	1	14.81	0.09
Hoffmanseggia	7	7	0	1	6	0	25.93	0.16
Senna	14	10	4	10	3	1	51.85	0.32
Zuccagnia	1	1	0	0	1	0	3.70	0.02
Subtotal	27	23	4	14	11	2	100.00	0.61
CALLITRICHACEAE								
Callitriche	5	5	0	0	5	0	100.00	0.11
Subtotal	5	5	0	0	5	0	100.00	0.11
CALYCERACEAE								
Boopis	11	8	3	2	9	0	22.45	0.25
Calycera	14	11	3	6	8	0	28.57	0.32
Gamocarpha	8	6	2	3	5	0	16.33	0.18
Moschopsis	4	4	0	0	4	0	8.16	0.09
Nastanthus	12	5	7	4	8	0	24.49	0.27
Subtotal	49	34	15	15	34	0	100.00	1.11
CAMPANULACEAE								
Cyphocarpus (E)	4	3	1	4	0	0	12.50	0.09
Downingia	1	1	0	0	1	0	3.12	0.02
Hypsela	1	1	0	0	1	0	3.12	0.02
Legenere	1	1	0	0	1	0	3.12	0.02
Lobelia	21	8	13	20	1	0	65.62	0.48
Pratia	2	2	0	0	2	0	6.25	0.05
Triodanis	1	1	0	0	1	0	3.12	0.02
Wahlenbergia	1	1	0	0	1	0	3.12	0.02
Subtotal	32	18	14	24	8	0	100.00	0.72
CAPPARACEAE								
Cleome	2	1	1	1	1	0	100.00	0.05
Subtotal	2	1	1	1	1	0	100.00	0.05
CAPRIFOLIACEAE								
Sambucus	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
CARICACEAE								
Carica	1	1	0	1	0	0	100.00	0.02
Subtotal	1	1	0	1	0	0	100.00	0.02
CARYOPHYLLACEAE								
Agrostemma	1	1	0	0	0	1	0.97	0.02
Arenaria	8	8	0	4	3	1	7.77	0.18
Cardionema	3	3	0	1	2	0	2.91	0.07
Cerastium	4	4	0	0	1	3	3.88	0.09
Colobanthus	4	3	1	0	4	0	3.88	0.09
Corrigiola	5	3	2	5	0	0	4.85	0.11
Dianthus	1	1	0	0	0	1	0.97	0.02
Drymaria	3	3	0	1	2	0	2.91	0.07
Herniaria	1	1	0	0	0	1	0.97	0.02
Honckenya	1	1	0	0	1	0	0.97	0.02
Lychnis	1	1	0	0	0	1	0.97	0.02
Microphyes (E)	4	3	1	4	0	0	3.88	0.09
Minuartia	1	1	0	0	1	0	0.97	0.02
Paronychia	9	5	4	7	2	0	8.74	0.20
Petrorhagia	2	2	0	0	0	2	1.94	0.05

	NT	NS	NI	EN	NA	AD	%F	%D
Philippiella	1	1	0	0	1	0	0.97	0.02
Polycarpon	2	2	0	1	0	1	1.94	0.05
Pycnophyllum	5	5	0	0	5	0	4.85	0.11
Reicheella	1	1	0	0	1	0	0.97	0.02
Sagina	6	3	3	3	1	2	5.83	0.14
Saponaria	1	1	0	0	0	1	0.97	0.02
Scleranthus	1	1	0	0	0	1	0.97	0.02
Silene	12	12	0	0	8	4	11.65	0.27
Spergula	1	1	0	0	0	1	0.97	0.02
Spergularia	17	17	0	8	5	4	16.50	0.39
Stellaria	8	8	0	2	3	3	7.77	0.18
Subtotal	103	92	11	36	40	27	100.00	2.31
CELASTRACEAE								
Maytenus	4	4	0	0	4	0	100.00	0.09
Subtotal	4	4	0	0	4	0	100.00	0.09
CERATOPHYLLACEAE								
Ceratophyllum	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
CHENOPODIACEAE								
Atriplex	28	28	0	13	7	8	50.00	0.63
Bassia	1	1	0	0	0	1	1.79	0.02
Chenopodium	19	18	1	1	12	6	33.93	0.43
Nitrophila	1	1	0	0	1	0	1.79	0.02
Salsola	1	1	0	0	0	1	1.79	0.02
Sarcocornia	1	1	0	0	1	0	1.79	0.02
Suaeda	5	4	1	0	5	0	8.93	0.11
Subtotal	56	54	2	14	26	16	100.00	1.25
COMPOSITAE								
Abrotanella	4	4	0	0	4	0	0.39	0.09
Achillea	1	1	0	0	0	1	0.10	0.02
Achyrocline	1	1	0	0	1	0	0.10	0.02
Acmella	1	1	0	0	0	1	0.10	0.02
Acrisione (E)	3	2	1	3	0	0	0.29	0.07
Adenocaulon	1	1	0	0	1	0	0.10	0.02
Ageratina	1	1	0	0	1	0	0.10	0.02
Agoseris	2	2	0	1	1	0	0.19	0.05
Amblyopappus	1	1	0	0	1	0	0.10	0.02
Ambrosia	5	5	0	0	2	3	0.48	0.11
Anaphalis	1	1	0	1	0	0	0.10	0.02
Antennaria	2	1	1	0	2	0	0.19	0.05
Anthemis	2	2	0	0	0	2	0.19	0.05
Aphyllocladus	2	1	1	2	0	0	0.19	0.05
Arctium	1	1	0	0	0	1	0.10	0.02
Arctotheca	1	1	0	0	0	1	0.10	0.02
Aristeguietia	1	1	0	1	0	0	0.10	0.02
Arnica	1	1	0	0	0	1	0.10	0.02
Artemisia	4	3	1	1	2	1	0.39	0.09
Aster	5	4	1	0	5	0	0.48	0.11
Baccharis	48	43	5	21	27	0	4.65	1.09
Bahia	1	1	0	1	0	0	0.10	0.02
Bellis	1	1	0	0	0	1	0.10	0.02
Bidens	12	7	5	1	6	5	1.16	0.27
Blennosperma	1	1	0	1	0	0	0.10	0.02
Brachyclados	1	1	0	1	0	0	0.10	0.02
Calendula	3	3	0	0	0	3	0.29	0.07
Calopappus (E)	1	1	0	1	0	0	0.10	0.02
Carduus	2	2	0	0	0	2	0.19	0.05
Carthamus	2	2	0	0	0	2	0.19	0.05

	NT	NS	NI	EN	NA	AD	%F	%D
Centaurea	14	12	2	9	0	5	1.36	0.32
Centipeda	1	1	0	0	1	0	0.10	0.02
Chaetanthera	48	37	11	25	23	0	4.65	1.09
Chamaemelum	1	1	0	0	0	1	0.10	0.02
Chamomilla	2	2	0	0	0	2	0.19	0.05
Chaptalia	1	1	0	1	0	0	0.10	0.02
Chersodoma	3	3	0	0	3	0	0.29	0.07
Chevreulia	3	3	0	0	3	0	0.29	0.07
Chiliophyllum	2	2	0	0	2	0	0.19	0.05
Chiliotrichum	2	2	0	0	2	0	0.19	0.05
Chrysanthemoides	1	1	0	0	0	1	0.10	0.02
Chrysanthemum	2	2	0	0	0	2	0.19	0.05
Chuquiraga	7	5	2	3	4	0	0.68	0.16
Cichorium	1	1	0	0	0	1	0.10	0.02
Cirsium	2	2	0	0	0	2	0.19	0.05
Cnicus	1	1	0	0	0	1	0.10	0.02
Coleostephus	1	1	0	0	0	1	0.10	0.02
Conyza	28	28	0	20	7	1	2.71	0.63
Coreopsis	1	1	0	1	0	0	0.10	0.02
Cotula	3	3	0	0	1	2	0.29	0.07
Crepis	3	3	0	0	0	3	0.29	0.07
Cuatrecasasiella	1	1	0	0	1	0	0.10	0.02
Cynara	1	1	0	0	0	1	0.10	0.02
Dasyphyllum	2	2	0	1	1	0	0.19	0.05
Diplostephium	3	3	0	1	2	0	0.29	0.07
Doniophyton	2	2	0	0	2	0	0.19	0.05
Eclipta	1	1	0	0	1	0	0.10	0.02
Encelia	5	1	4	2	3	0	0.48	0.11
Erechtites	1	1	0	1	0	0	0.10	0.02
Eriachaenium	1	1	0	0	1	0	0.10	0.02
Erigeron	13	13	0	5	7	1	1.26	0.29
Facelis	4	2	2	1	3	0	0.39	0.09
Filago	1	1	0	0	0	1	0.10	0.02
Flaveria	1	1	0	0	1	0	0.10	0.02
Flourensia	1	1	0	1	0	0	0.10	0.02
Galinsoga	2	2	0	0	2	0	0.19	0.05
Gamochaeta	22	22	0	7	15	0	2.13	0.50
Gnaphalium	33	31	2	18	14	1	3.19	0.75
Gochnatia	2	1	1	2	0	0	0.19	0.05
Grindelia	4	4	0	1	3	0	0.39	0.09
Gutierrezia	6	6	0	5	1	0	0.58	0.14
Gypothamnium (E)	1	1	0	1	0	0	0.10	0.02
Haplopappus	66	64	2	52	14	0	6.39	1.50
Hedypnois	1	1	0	0	0	1	0.10	0.02
Helenium	8	7	1	8	0	0	0.77	0.18
Helianthus	1	1	0	0	0	1	0.10	0.02
Helogyne	2	2	0	1	1	0	0.19	0.05
Heterosperma	2	2	0	0	2	0	0.19	0.05
Hieracium	10	9	1	0	6	4	0.97	0.23
Hinterhubera	1	1	0	1	0	0	0.10	0.02
Hypochaeris	42	36	6	19	20	3	4.07	0.95
Hysterionica	1	1	0	0	1	0	0.10	0.02
Iocenes	2	1	1	0	2	0	0.19	0.05
Lactuca	2	2	0	0	0	2	0.19	0.05
Lagenophora	3	3	0	0	3	0	0.29	0.07
Lapsana	1	1	0	0	0	1	0.10	0.02
Lasthenia	1	1	0	1	0	0	0.10	0.02
Leontodon	3	3	0	0	0	3	0.29	0.07
Lepidophyllum	1	1	0	0	1	0	0.10	0.02
Leptinella	1	1	0	0	1	0	0.10	0.02
Leptocarpha (E)	1	1	0	1	0	0	0.10	0.02
Leucanthemum	1	1	0	0	0	1	0.10	0.02
Leucheria	46	43	3	19	27	0	4.45	1.04
Leunisia	1	1	0	0	1	0	0.10	0.02
Lophopappus	1	1	0	1	0	0	0.10	0.02
Lucilia	5	5	0	1	4	0	0.48	0.11
Macrachaenium	1	1	0	0	1	0	0.10	0.02
Madia	2	2	0	1	1	0	0.19	0.05
Malacothrix	2	2	0	0	2	0	0.19	0.05
Marticorenia (E)	1	1	0	1	0	0	0.10	0.02
Micropsis	1	1	0	0	1	0	0.10	0.02
Microseris	1	1	0	0	1	0	0.10	0.02
Mikania	1	1	0	0	1	0	0.10	0.02
Mniodes	1	1	0	0	1	0	0.10	0.02
Moscharia (E)	2	2	0	2	0	0	0.19	0.05
Mutisia	28	23	5	14	14	0	2.71	0.63
Nardophyllum	5	5	0	1	4	0	0.48	0.11
Nassauvia	30	25	5	3	27	0	2.90	0.68
Noticastrum	5	5	0	4	1	0	0.48	0.11
Onopordon	1	1	0	0	0	1	0.10	0.02
Ophryosporus	5	5	0	4	1	0	0.48	0.11
Oxyphyllum (E)	1	1	0	1	0	0	0.10	0.02
Pachylaena	2	2	0	0	2	0	0.19	0.05
Parastrephia	5	5	0	0	5	0	0.48	0.11
Perezia	25	23	2	1	24	0	2.42	0.57
Perityle	1	1	0	0	1	0	0.10	0.02
Picris	1	1	0	0	0	1	0.10	0.02
Picrosia	1	1	0	0	1	0	0.10	0.02
Plazia	2	2	0	1	1	0	0.19	0.05
Pleocarphus (E)	1	1	0	1	0	0	0.10	0.02
Pluchea	1	1	0	0	1	0	0.10	0.02
Podanthus (E)	2	2	0	2	0	0	0.19	0.05
Polyachyrus	8	7	1	6	2	0	0.77	0.18
Proustia	7	3	4	6	1	0	0.68	0.16
Psilocarphus	1	1	0	0	1	0	0.10	0.02
Schkuhria	3	2	1	0	3	0	0.29	0.07
Scolymus	1	1	0	0	0	1	0.10	0.02
Senecio	252	223	29	116	131	5	24.39	5.71
Sigesbeckia	1	1	0	0	1	0	0.10	0.02
Silybum	1	1	0	0	0	1	0.10	0.02
Solidago	2	2	0	0	2	0	0.19	0.05
Soliva	4	4	0	1	3	0	0.39	0.09
Sonchus	4	4	0	0	0	4	0.39	0.09
Spilanthes	1	1	0	0	1	0	0.10	0.02
Stevia	2	2	0	1	1	0	0.19	0.05
Tagetes	4	4	0	0	3	1	0.39	0.09
Tanacetum	2	2	0	0	0	2	0.19	0.05
Taraxacum	2	2	0	0	1	1	0.19	0.05
Tessaria	1	1	0	0	1	0	0.10	0.02
Tolpis	1	1	0	0	0	1	0.10	0.02
Tragopogon	1	1	0	0	0	1	0.10	0.02
Trichocline	5	5	0	3	2	0	0.48	0.11
Tripleurospermum	1	1	0	0	0	1	0.10	0.02
Triptilion	20	14	6	19	1	0	1.94	0.45
Trixis	1	1	0	0	1	0	0.10	0.02
Urmenetea	1	1	0	0	1	0	0.10	0.02
Urospermum	1	1	0	0	0	1	0.10	0.02
Verbesina	2	2	0	1	1	0	0.19	0.05
Viguiera	6	6	0	3	3	0	0.58	0.14
Villanova	2	2	0	1	1	0	0.19	0.05
Wedelia	1	1	0	0	1	0	0.10	0.02
Werneria	14	14	0	3	11	0	1.36	0.32
Xanthium	4	4	0	1	0	3	0.39	0.09
Subtotal	1033	927	106	441	502	90	100.00	23.36
CONVOLVULACEAE								
Calystegia	4	3	1	0	2	2	22.22	0.09
Convolvulus	7	6	1	1	5	1	38.89	0.16
Cressa	1	1	0	0	1	0	5.56	0.02
Dichondra	3	1	2	0	3	0	16.67	0.07
Evolvulus	2	1	1	0	2	0	11.11	0.05

	NT	NS	NI	EN	NA	AD	%F	%D
Ipomoea	1	1	0	0	0	1	5.56	0.02
Subtotal	18	13	5	1	13	4	100.00	0.41
CORIARIACEAE								
Coriaria	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
CORNACEAE								
Griselinia	4	4	0	3	1	0	100.00	0.09
Subtotal	4	4	0	3	1	0	100.00	0.09
CRASSULACEAE								
Crassula	7	7	0	2	5	0	87.50	0.16
Sedum	1	1	0	0	0	1	12.50	0.02
Subtotal	8	8	0	2	5	1	100.00	0.18
CRUCIFERAE								
Agallis (E)	1	1	0	1	0	0	0.45	0.02
Alyssum	1	1	0	0	0	1	0.45	0.02
Barbarea	1	1	0	0	0	1	0.45	0.02
Brassica	4	4	0	0	0	4	1.80	0.09
Camelina	1	1	0	0	0	1	0.45	0.02
Capsella	1	1	0	0	0	1	0.45	0.02
Cardamine	36	20	16	17	19	0	16.22	0.82
Cardaria	1	1	0	0	0	1	0.45	0.02
Coronopus	4	3	1	2	1	1	1.80	0.09
Crambe	1	1	0	0	0	1	0.45	0.02
Cremolobus	1	1	0	0	1	0	0.45	0.02
Descurainia	24	15	9	8	15	1	10.81	0.54
Diplotaxis	2	2	0	1	0	1	0.90	0.05
Draba	8	8	0	1	6	1	3.60	0.18
Eremodraba	1	1	0	1	0	0	0.45	0.02
Eruca	1	1	0	0	0	1	0.45	0.02
Eudema	2	2	0	0	2	0	0.90	0.05
Grammosperma	1	1	0	0	1	0	0.45	0.02
Hesperis	1	1	0	0	0	1	0.45	0.02
Hirschfeldia	1	1	0	0	0	1	0.45	0.02
Hollermayera (E)	1	1	0	1	0	0	0.45	0.02
Hymenolobus	1	1	0	0	0	1	0.45	0.02
Isatis	1	1	0	0	0	1	0.45	0.02
Ivania (E)	1	1	0	1	0	0	0.45	0.02
Lepidium	24	24	0	9	13	2	10.81	0.54
Lobularia	1	1	0	0	0	1	0.45	0.02
Mancoa	2	2	0	0	2	0	0.90	0.05
Mathewsia	6	6	0	6	0	0	2.70	0.14
Menonvillea	20	19	1	15	5	0	9.01	0.45
Neuontobothrys	2	2	0	0	2	0	0.90	0.05
Onuris	5	5	0	0	5	0	2.25	0.11
Raphanus	2	2	0	0	0	2	0.90	0.05
Rapistrum	1	1	0	0	0	1	0.45	0.02
Rorippa	7	7	0	1	5	1	3.15	0.16
Schizopetalon	10	10	0	9	1	0	4.50	0.23
Sisymbrium	32	28	4	13	14	5	14.41	0.72
Thlaspi	3	3	0	1	1	1	1.35	0.07
Weberbauera	7	7	0	4	3	0	3.15	0.16
Werdermannia	2	2	0	2	0	0	0.90	0.05
Xerodraba	1	1	0	0	1	0	0.45	0.02
Subtotal	222	191	31	93	97	32	100.00	5.00
CUCURBITACEAE								
Sicyos	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
CUNONIACEAE								
Caldcluvia	1	1	0	0	1	0	50.00	0.02
Weinmannia	1	1	0	0	1	0	50.00	0.02
Subtotal	2	2	0	0	2	0	100.00	0.04
CUSCUTACEAE								
Cuscuta	11	10	1	2	9	0	100.00	0.25
Subtotal	11	10	1	2	9	0	100.00	0.25
DESFONTAINIACEAE								
Desfontainia	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
DIPSACACEAE								
Dipsacus	1	1	0	0	0	1	33.33	0.02
Knautia	1	1	0	0	0	1	33.33	0.02
Scabiosa	1	1	0	0	0	1	33.33	0.02
Subtotal	3	3	0	0	0	3	100.00	0.06
DONATIACEAE								
Donatia	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
DROSERACEAE								
Drosera	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
ELAEOCARPACEAE								
Aristotelia	1	1	0	0	1	0	33.33	0.02
Crinodendron	2	2	0	2	0	0	66.67	0.05
Subtotal	3	3	0	2	1	0	100.00	0.07
ELATINACEAE								
Elatine	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
EMPETRACEAE								
Empetrum	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
EPACRIDACEAE								
Lebetanthus	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
EREMOLEPIDACEAE								
Antidaphne	1	1	0	1	0	0	50.00	0.02
Lepidoceras	1	1	0	1	0	0	50.00	0.02
Subtotal	2	2	0	2	0	0	100.00	0.04

	NT	NS	NI	EN	NA	AD	%F	%D
ERICACEAE								
Gaultheria	6	6	0	1	5	0	37.50	0.14
Pernettya	10	4	6	1	9	0	62.50	0.23
Subtotal	16	10	6	2	14	0	100.00	0.37
EUCRYPHIACEAE								
Eucryphia	2	2	0	1	1	0	100.00	0.05
Subtotal	2	2	0	1	1	0	100.00	0.05
EUPHORBIACEAE								
Adenopeltis (E)	1	1	0	1	0	0	2.22	0.02
Argythamnia	5	4	1	5	0	0	11.11	0.11
Avellanita (E)	1	1	0	1	0	0	2.22	0.02
Colliguaja	4	4	0	3	1	0	8.89	0.09
Croton	1	1	0	1	0	0	2.22	0.02
Dysopsis	1	1	0	0	1	0	2.22	0.02
Eremocarpus	1	1	0	0	0	1	2.22	0.02
Euphorbia	30	29	1	14	6	10	66.67	0.68
Ricinus	1	1	0	0	0	1	2.22	0.02
Subtotal	45	43	2	25	8	12	100.00	1.00
FAGACEAE								
Nothofagus	11	10	1	5	6	0	100.00	0.25
Subtotal	11	10	1	5	6	0	100.00	0.25
FLACOURTIACEAE								
Azara	8	8	0	5	3	0	88.89	0.18
Berberidopsis	1	1	0	1	0	0	11.11	0.02
Subtotal	9	9	0	6	3	0	100.00	0.02
FRANKENIACEAE								
Frankenia	4	4	0	1	3	0	100.00	0.09
Subtotal	4	4	0	1	3	0	100.00	0.09
FUMARIACEAE								
Fumaria	4	4	0	0	0	4	100.00	0.09
Subtotal	4	4	0	0	0	4	100.00	0.09
GENTIANACEAE								
Centaurium	3	3	0	0	1	2	23.08	0.07
Cicendia	1	1	0	0	1	0	7.69	0.02
Gentiana	6	6	0	5	1	0	46.15	0.14
Gentianella	3	3	0	1	2	0	23.08	0.07
Subtotal	13	13	0	6	5	2	100.00	0.30
GERANIACEAE								
Erodium	5	4	1	0	0	5	17.86	0.11
Geranium	23	22	1	12	5	6	82.14	0.52
Subtotal	28	26	2	12	5	11	100.00	0.63
GESNERIACEAE								
Asteranthera	1	1	0	0	1	0	33.33	0.02
Mitraria	1	1	0	0	1	0	33.33	0.02
Sarmienta (E)	1	1	0	1	0	0	33.33	0.02
Subtotal	3	3	0	1	2	0	100.00	0.06
GOMORTEGACEAE (E)								
Gomortega (E)	1	1	0	1	0	0	100.00	0.02
Subtotal	1	1	0	1	0	0	100.00	0.02
GOODENIACEAE								
Selliera	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
GUNNERACEAE								
Gunnera	7	7	0	4	3	0	100.00	0.16
Subtotal	7	7	0	4	3	0	100.00	0.16
GUTTIFERAE								
Hypericum	5	5	0	1	1	3	100.00	0.11
Subtotal	5	5	0	1	1	3	100.00	0.11
HALORAGACEAE								
Myriophyllum	2	2	0	0	2	0	100.00	0.05
Subtotal	2	2	0	0	2	0	100.00	0.05
HIPPURIDACEAE								
Hippuris	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
HYDRANGEACEAE								
Hydrangea	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
HYDROPHYLLACEAE								
Nama	2	2	0	1	1	0	25.00	0.05
Phacelia	6	6	0	0	6	0	75.00	0.14
Subtotal	8	8	0	1	7	0	100.00	0.19
ICACINACEAE								
Citronella	1	1	0	1	0	0	100.00	0.02
Subtotal	1	1	0	1	0	0	100.00	0.02
KRAMERIACEAE								
Krameria	2	2	0	1	1	0	100.00	0.05
Subtotal	2	2	0	1	1	0	100.00	0.05
LABIATAE								
Galeopsis	1	1	0	0	0	1	2.50	0.02
Glechoma	1	1	0	0	0	1	2.50	0.02
Kurzamra	1	1	0	0	1	0	2.50	0.02
Lamium	1	1	0	0	0	1	2.50	0.02
Lycopus	1	1	0	0	0	1	2.50	0.02
Marrubium	1	1	0	0	0	1	2.50	0.02
Melissa	1	1	0	0	0	1	2.50	0.02
Mentha	4	4	0	0	0	4	10.00	0.09
Prunella	1	1	0	0	0	1	2.50	0.02
Salvia	4	4	0	0	4	0	10.00	0.09
Satureja	4	4	0	2	2	0	10.00	0.09
Scutellaria	3	3	0	1	2	0	7.50	0.07
Sphacele	3	3	0	3	0	0	7.50	0.07

	NT	NS	NI	EN	NA	AD	%F	%D
Stachys	12	12	0	10	1	1	30.00	0.27
Teucrium	2	2	0	2	0	0	5.00	0.05
Subtotal	40	40	0	18	10	12	100.00	0.89
LARDIZABALACEAE								
Boquila	1	1	0	0	1	0	50.00	0.02
Lardizabala (E)	1	1	0	1	0	0	50.00	0.02
Subtotal	2	2	0	1	1	0	100.00	0.04
LAURACEAE								
Beilschmiedia	2	2	0	2	0	0	40.00	0.05
Cryptocarya	1	1	0	1	0	0	20.00	0.02
Persea	2	2	0	1	1	0	40.00	0.05
Subtotal	5	5	0	4	1	0	100.00	0.12
LEDOCARPACEAE								
Balbisia	3	3	0	3	0	0	75.00	0.07
Wendtia	1	1	0	0	1	0	25.00	0.02
Subtotal	4	4	0	3	1	0	100.00	0.09
LENTIBULARIACEAE								
Pinguicula	2	2	0	0	2	0	66.67	0.05
Utricularia	1	1	0	0	1	0	33.33	0.02
Subtotal	3	3	0	0	3	0	100.00	0.07
LINACEAE								
Cliococca	1	1	0	0	1	0	11.11	0.02
Linum	8	7	1	5	1	2	88.89	0.18
Subtotal	9	8	1	5	2	2	100.00	0.20
LOASACEAE								
Caiophora	15	13	2	7	8	0	19.23	0.34
Loasa	53	45	8	41	12	0	67.95	1.20
Mentzelia	8	7	1	2	6	0	10.26	0.18
Scyphanthus (E)	2	2	0	2	0	0	2.56	0.05
Subtotal	78	67	11	52	26	0	100.00	1.77
LORANTHACEAE								
Desmaria (E)	1	1	0	1	0	0	16.67	0.02
Ligaria	1	1	0	0	1	0	16.67	0.02
Notanthera (E)	1	1	0	1	0	0	16.67	0.02
Tristerix	3	3	0	1	2	0	50.00	0.07
Subtotal	6	6	0	3	3	0	100.00	0.13
LYTHRACEAE								
Ammannia	1	1	0	0	0	1	9.09	0.02
Lythrum	4	4	0	0	0	4	36.36	0.09
Pleurophora	6	3	3	6	0	0	54.55	0.14
Subtotal	11	8	3	6	0	5	100.00	0.25
MALESHERBIACEAE								
Malesherbia	25	18	7	24	1	0	100.00	0.57
Subtotal	25	18	7	24	1	0	100.00	0.57
MALPIGHIACEAE								
Dinemagonum (E)	1	1	0	1	0	0	50.00	0.02
Dinemandra (E)	1	1	0	1	0	0	50.00	0.02
Subtotal	2	2	0	2	0	0	100.00	0.04
MALVACEAE								
Anoda	1	1	0	0	0	1	0.76	0.02
Corynabutilon	5	5	0	4	1	0	3.79	0.11
Cristaria	65	60	5	61	4	0	49.24	1.47
Gossypium	1	1	0	0	0	1	0.76	0.02
Hibiscus	1	1	0	0	0	1	0.76	0.02
Lavatera	2	2	0	0	0	2	1.52	0.05
Malacothamnus	1	1	0	0	1	0	0.76	0.02
Malva	3	3	0	0	0	3	2.27	0.07
Malvella	1	1	0	0	1	0	0.76	0.02
Modiola	1	1	0	0	0	1	0.76	0.02
Nototriche	30	29	1	6	24	0	22.73	0.68
Palaua	5	5	0	2	3	0	3.79	0.11
Sida	2	2	0	0	0	2	1.52	0.05
Sphaeralcea	3	3	0	2	1	0	2.27	0.07
Tarasa	9	9	0	2	7	0	6.82	0.20
Urocarpidium	2	2	0	0	2	0	1.52	0.05
Subtotal	132	126	6	77	44	11	100.00	2.98
MIMOSACEAE								
Acacia	8	8	0	0	1	7	53.33	0.18
Calliandra	1	1	0	1	0	0	6.67	0.02
Prosopis	6	6	0	2	4	0	40.00	0.14
Subtotal	15	15	0	3	5	7	100.00	0.34
MISODENDRACEAE								
Misodendrum	9	8	1	1	8	0	100.00	0.20
Subtotal	9	8	1	1	8	0	100.00	0.20
MOLLUGINACEAE								
Glinus	1	1	0	0	1	0	50.00	0.02
Mollugo	1	1	0	0	0	1	50.00	0.02
Subtotal	2	2	0	0	1	1	100.00	0.04
MONIMIACEAE								
Laurelia	1	1	0	1	0	0	33.33	0.02
Laureliopsis	1	1	0	0	1	0	33.33	0.02
Peumus (E)	1	1	0	1	0	0	33.33	0.02
Subtotal	3	3	0	2	1	0	100.00	0.06
MYRICACEAE								
Myrica	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
MYRTACEAE								
Amomyrtus	2	2	0	1	1	0	8.33	0.05
Blepharocalyx	1	1	0	1	0	0	4.17	0.02
Legrandia (E)	1	1	0	1	0	0	4.17	0.02
Luma	2	2	0	1	1	0	8.33	0.05
Myrceugenia	13	12	1	9	4	0	54.17	0.29
Myrcianthes	1	1	0	1	0	0	4.17	0.02
Myrteola	1	1	0	0	1	0	4.17	0.02
Tepualia	1	1	0	0	1	0	4.17	0.02
Ugni	2	2	0	1	1	0	8.33	0.05
Subtotal	24	23	1	15	9	0	100.00	0.54

	NT	NS	NI	EN	NA	AD	%F	%D
NOLANACEAE								
Alona (E)	6	6	0	6	0	0	13.95	0.14
Nolana	37	37	0	34	3	0	86.05	0.84
Subtotal	43	43	0	40	3	0	100.00	0.98
NYCTAGINACEAE								
Allionia	1	1	0	0	1	0	14.29	0.02
Boerhavia	2	2	0	0	2	0	28.57	0.05
Oxybaphus	4	4	0	1	3	0	57.14	0.09
Subtotal	7	7	0	1	6	0	100.00	0.16
NYMPHAEACEAE								
Nymphaea	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
OLEACEAE								
Menodora	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
ONAGRACEAE								
Boisduvalia	1	1	0	0	1	0	2.27	0.02
Camissonia	2	1	1	1	1	0	4.55	0.05
Clarkia	4	1	3	3	1	0	9.09	0.09
Epilobium	12	12	0	0	10	2	27.27	0.27
Fuchsia	2	2	0	1	1	0	4.55	0.05
Gayophytum	2	2	0	0	2	0	4.55	0.05
Ludwigia	4	4	0	0	4	0	9.09	0.09
Oenothera	17	17	0	3	11	3	38.64	0.39
Subtotal	44	40	4	8	31	5	100.00	1.01
OROBANCHACEAE								
Orobanche	4	4	0	1	1	2	100.00	0.09
Subtotal	4	4	0	1	1	2	100.00	0.09
OXALIDACEAE								
Oxalis	128	119	9	88	38	2	100.00	2.90
Subtotal	128	119	9	88	38	2	100.00	2.90
PAPAVERACEAE								
Argemone	4	4	0	3	1	0	66.67	0.09
Eschscholzia	1	1	0	0	0	1	16.67	0.02
Papaver	1	1	0	0	0	1	16.67	0.02
Subtotal	6	6	0	3	1	2	100.00	0.13
PAPILIONACEAE								
Adesmia	138	132	6	92	46	0	42.99	3.13
Anarthrophyllum	6	5	1	2	4	0	1.87	0.14
Astragalus	46	46	0	21	25	0	14.33	1.04
Crotalaria	1	1	0	0	0	1	0.31	0.02
Cytisus	2	2	0	0	0	2	0.62	0.05
Dalea	3	3	0	2	1	0	0.93	0.07
Desmodium	1	1	0	0	0	1	0.31	0.02
Dolichos	1	1	0	0	0	1	0.31	0.02
Errazurizia	1	1	0	1	0	0	0.31	0.02
Galega	1	1	0	0	0	1	0.31	0.02
Geoffroea	1	1	0	0	1	0	0.31	0.02
Glycyrrhiza	1	1	0	0	1	0	0.31	0.02

	NT	NS	NI	EN	NA	AD	%F	%D
Indigofera	1	1	0	0	0	1	0.31	0.02
Lathyrus	19	16	3	4	10	5	5.92	0.43
Lotus	4	4	0	0	1	3	1.25	0.09
Lupinus	10	10	0	1	5	4	3.12	0.23
Medicago	8	8	0	0	0	8	2.49	0.18
Melilotus	4	4	0	0	0	4	1.25	0.09
Ornithopus	3	3	0	0	0	3	0.93	0.07
Otholobium	2	2	0	1	1	0	0.62	0.05
Rhynchosia	1	1	0	0	0	1	0.31	0.02
Robinia	1	1	0	0	0	1	0.31	0.02
Sophora	2	2	0	1	1	0	0.62	0.05
Spartium	1	1	0	0	0	1	0.31	0.02
Teline	1	1	0	0	0	1	0.31	0.02
Trifolium	23	23	0	4	4	15	7.17	0.52
Trigonella	1	1	0	0	0	1	0.31	0.02
Ulex	1	1	0	0	0	1	0.31	0.02
Vicia	37	35	2	23	7	7	11.53	0.84
Subtotal	321	309	12	152	107	62	100.00	7.26
PASSIFLORACEAE								
Passiflora	2	2	0	0	1	1	100.00	0.05
Subtotal	2	2	0	0	1	1	100.00	0.05
PHYTOLACCACEAE								
Anisomeria (E)	2	2	0	2	0	0	40.00	0.05
Ercilla (E)	2	2	0	2	0	0	40.00	0.05
Phytolacca	1	1	0	0	1	0	20.00	0.02
Subtotal	5	5	0	4	1	0	100.00	0.12
PIPERACEAE								
Peperomia	4	4	0	3	1	0	100.00	0.09
Subtotal	4	4	0	3	1	0	100.00	0.09
PLANTAGINACEAE								
Littorella	1	1	0	0	1	0	3.70	0.02
Plantago	26	22	4	6	16	4	96.30	0.59
Subtotal	27	23	4	6	17	4	100.00	0.61
PLUMBAGINACEAE								
Armeria	1	1	0	0	1	0	25.00	0.02
Limonium	2	2	0	2	0	0	50.00	0.05
Plumbago	1	1	0	0	1	0	25.00	0.02
Subtotal	4	4	0	2	2	0	100.00	0.09
POLEMONIACEAE								
Collomia	2	2	0	1	1	0	18.18	0.05
Gilia	4	4	0	0	4	0	36.36	0.09
Ipomopsis	1	1	0	0	1	0	9.09	0.02
Linanthus	1	1	0	1	0	0	9.09	0.02
Microsteris	1	1	0	0	1	0	9.09	0.02
Navarretia	1	1	0	0	1	0	9.09	0.02
Polemonium	1	1	0	0	1	0	9.09	0.02
Subtotal	11	11	0	2	9	0	100.00	0.24
POLYGALACEAE								
Monnina	4	4	0	4	0	0	33.33	0.09
Polygala	8	8	0	5	3	0	66.67	0.18
Subtotal	12	12	0	9	3	0	100.00	0.27

	NT	NS	NI	EN	NA	AD	%F	%D
POLYGONACEAE								
Bilderdykia	1	1	0	0	0	1	1.61	0.02
Chorizanthe	28	24	4	28	0	0	45.16	0.63
Emex	1	1	0	0	0	1	1.61	0.02
Koenigia	1	1	0	0	0	1	1.61	0.02
Lastarriaea	1	1	0	1	0	0	1.61	0.02
Muehlenbeckia	1	1	0	0	1	0	1.61	0.02
Oxytheca	1	1	0	0	1	0	1.61	0.02
Polygonum	10	10	0	1	0	9	16.13	0.23
Rumex	18	17	1	4	7	7	29.03	0.41
Subtotal	62	57	5	34	9	19	100.00	1.39
PORTULACACEAE								
Calandrinia	68	64	4	43	25	0	87.18	1.54
Lenzia	1	1	0	0	1	0	1.28	0.02
Monocosmia	1	1	0	0	1	0	1.28	0.02
Montia	2	1	1	0	2	0	2.56	0.05
Philippiamra	4	4	0	3	1	0	5.13	0.09
Portulaca	2	2	0	0	1	1	2.56	0.05
Subtotal	78	73	5	46	31	1	100.00	1.77
PRIMULACEAE								
Anagallis	6	3	3	2	3	1	42.86	0.14
Androsace	1	1	0	0	1	0	7.14	0.02
Lysimachia	1	1	0	0	1	0	7.14	0.02
Pelletiera	1	1	0	0	1	0	7.14	0.02
Primula	1	1	0	0	1	0	7.14	0.02
Samolus	4	4	0	0	3	1	28.57	0.09
Subtotal	14	11	3	2	10	2	100.00	0.31
PROTEACEAE								
Embothrium	1	1	0	0	1	0	16.67	0.02
Gevuina	1	1	0	0	1	0	16.67	0.02
Lomatia	3	3	0	0	3	0	50.00	0.07
Orites	1	1	0	1	0	0	16.67	0.02
Subtotal	6	6	0	1	5	0	100.00	0.13
RAFFLESIACEAE								
Pilostyles	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
RANUNCULACEAE								
Anemone	7	6	1	3	4	0	14.89	0.16
Aquilegia	1	1	0	0	0	1	2.13	0.02
Barneoudia	3	3	0	1	2	0	6.38	0.07
Caltha	3	3	0	0	3	0	6.38	0.07
Clematis	1	1	0	0	0	1	2.13	0.02
Hamadryas	4	4	0	0	4	0	8.51	0.09
Myosurus	2	2	0	0	2	0	4.26	0.05
Ranunculus	26	22	4	0	21	5	55.32	0.59
Subtotal	47	42	5	4	36	7	100.00	1.07
RESEDACEAE								
Reseda	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
RHAMNACEAE								
Colletia	2	2	0	1	1	0	11.76	0.05
Condalia (Chile?)	1	1	0	0	1	0	5.88	0.02
Discaria	4	4	0	0	4	0	23.53	0.09
Retanilla	3	2	1	3	0	0	17.65	0.07
Rhamnus	1	1	0	1	0	0	5.88	0.02
Talguenea (E)	1	1	0	1	0	0	5.88	0.02
Trevoa	5	[illegible]	0	4	1	0	29.41	0.11
Subtotal	17	16	[illegible]	10	7	0	100.00	0.38
ROSACEAE								
Acaena	21	19	2	5	16	0	38.18	0.48
Aphanes	5	4	1	3	1	1	9.09	0.11
Duchesnea	1	1	0	0	0	1	1.82	0.02
Fragaria	2	1	1	0	2	0	3.64	0.05
Geum	4	4	0	0	4	0	7.27	0.09
Kageneckia	2	2	0	2	0	0	3.64	0.05
Lachemilla	3	3	0	0	3	0	5.45	0.07
Margyricarpus	1	1	0	0	1	0	1.82	0.02
Polylepis	2	2	0	0	2	0	3.64	0.05
Potentilla	1	1	0	0	0	1	1.82	0.02
Quillaja	1	1	0	1	0	0	1.82	0.02
Rosa	3	3	0	0	0	3	5.45	0.07
Rubus	4	4	0	0	2	2	7.27	0.09
Sanguisorba	2	2	0	0	0	2	3.64	0.05
Tetraglochin	3	3	0	0	0	3	5.45	0.07
Subtotal	55	51	4	11	31	13	100.00	1.26
RUBIACEAE								
Cruckshanksia	8	7	1	6	2	0	18.18	0.18
Galium	23	22	1	9	9	5	52.27	0.52
Hedyotis	1	1	0	0	1	0	2.27	0.02
Leptostigma	1	1	0	1	0	0	2.27	0.02
Nertera	1	1	0	0	1	0	2.27	0.02
Oreopolus	3	3	0	2	1	0	6.82	0.07
Relbunium	5	2	3	0	5	0	11.36	0.11
Rubia	1	1	0	0	0	1	2.27	0.02
Sherardia	1	1	0	0	0	1	2.27	0.02
Subtotal	44	39	5	18	19	7	100.00	0.98
RUTACEAE								
Pitavia (E)	1	1	0	1	0	0	33.33	0.02
Ruta	2	2	0	0	0	2	66.67	0.05
Subtotal	3	3	0	1	0	2	100.00	0.07
SALICACEAE								
Populus	0	0	0	0	0	0	0.00	0.00
Salix	3	3	0	0	1	2	100.00	0.07
Subtotal	3	3	0	0	1	2	100.00	0.07
SANTALACEAE								
Arjona	3	3	0	0	3	[illegible]	13.64	0.07
Myoschilos	[illegible]	1	0	0	1	[illegible]	4.55	0.02
Nanodea	[illegible]	1	[illegible]	0	1	[illegible]	4.55	0.02
Quinchamalium	17	16	1	14	3	[illegible]	77.27	[illegible]
Subtotal	22	[illegible]	[illegible]	14	8	0	100.00	[illegible]
SAPINDACEAE								
Bridgesia	1	1	0	0	1	0	25.00	0.02
Dodonaea	[illegible]	[illegible]	0	0	0	1	25.00	0.02
Guindilia	1	1	0	0	1	0	25.00	0.02
Llagunoa (E)	1	1	0	1	0	0	25.00	0.02
Subtotal	4	4	0	1	2	1	100.00	0.08

	NT	NS	NI	EN	NA	AD	%F	%D
SAPOTACEAE								
Pouteria	1	1	0	1	0	0	100.00	0.02
Subtotal	1	1	0	1	0	0	100.00	0.02
SAXIFRAGACEAE								
Chrysosplenium	2	2	0	0	2	0	3.92	0.05
Escallonia	22	13	9	12	10	0	43.14	0.50
Francoa (E)	3	1	2	3	0	0	5.88	0.07
Lepuropetalon	1	1	0	0	1	0	1.96	0.02
Ribes	16	13	3	9	7	0	31.37	0.36
Saxifraga	2	2	0	0	1	1	3.92	0.05
Saxifragella	1	1	0	0	1	0	1.96	0.02
Saxifragodes	1	1	0	0	1	0	1.96	0.02
Tetilla (E)	1	1	0	1	0	0	1.96	0.02
Tribeles	1	1	0	0	1	0	1.96	0.02
Valdivia (E)	1	1	0	1	0	0	1.96	0.02
Subtotal	51	37	14	26	24	1	100.00	1.15
SCROPHULARIACEAE								
Agalinis	1	1	0	0	1	0	0.55	0.02
Alonsoa	1	1	0	0	1	0	0.55	0.02
Bacopa	1	1	0	0	1	0	0.55	0.02
Bartsia	3	3	0	1	2	0	1.65	0.07
Bellardia	1	1	0	0	0	1	0.55	0.02
Calceolaria	92	80	12	65	26	1	50.55	2.08
Castilleja	2	2	0	0	2	0	1.10	0.05
Cymbalaria	1	1	0	0	0	1	0.55	0.02
Digitalis	1	1	0	0	0	1	0.55	0.02
Euphrasia	15	15	0	11	4	0	8.24	0.34
Fonkia	1	1	0	0	1	0	0.55	0.02
Gratiola	1	1	0	0	1	0	0.55	0.02
Hebe	2	2	0	0	2	0	1.10	0.05
Jovellana	3	3	0	3	0	0	1.65	0.07
Kickxia	1	1	0	0	0	1	0.55	0.02
Limosella	1	1	0	0	1	0	0.55	0.02
Linaria	2	2	0	0	0	2	1.10	0.05
Lindernia	1	1	0	0	1	0	0.55	0.02
Mecardonia	1	1	0	0	1	0	0.55	0.02
Melosperma	2	1	1	0	2	0	1.10	0.05
Mimulus	14	8	6	10	4	0	7.69	0.32
Misopates	1	1	0	0	0	1	0.55	0.02
Monttea	2	1	1	2	0	0	1.10	0.05
Orthocarpus	2	2	0	0	2	0	1.10	0.05
Ourisia	13	13	0	3	10	0	7.14	0.29
Parentucellia	2	2	0	0	0	2	1.10	0.05
Scrophularia	1	1	0	0	0	1	0.55	0.02
Stemodia	1	1	0	0	1	0	0.55	0.02
Verbascum	3	3	0	0	0	3	1.65	0.07
Veronica	10	9	1	0	0	10	5.49	0.23
Subtotal	182	161	21	95	63	24	100.00	4.12
SIMAROUBACEAE								
Ailanthus	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
SOLANACEAE								
Benthamiella	4	4	0	0	4	0	2.55	0.09
Cacabus	2	2	0	1	1	0	1.27	0.05
Cestrum	1	1	0	0	1	0	0.64	0.02
Combera	2	2	0	1	1	0	1.27	0.05
Datura	3	3	0	0	0	3	1.91	0.07
Dunalia	1	1	0	0	1	0	0.64	0.02
Fabiana	7	7	0	2	5	0	4.46	0.16
Grabowskia	1	1	0	1	0	0	0.64	0.02
Jaborosa	10	9	1	2	8	0	6.37	0.23
Latua (E)	1	1	0	1	0	0	0.64	0.02
Lycianthes	1	1	0	0	1	0	0.64	0.02
Lycium	13	9	4	3	10	0	8.28	0.29
Lycopersicon	1	1	0	0	1	0	0.64	0.02
Nicandra	1	1	0	0	1	0	0.64	0.02
Nicotiana	14	11	3	6	7	1	8.92	0.32
Nierembergia	1	1	0	0	1	0	0.64	0.02
Petunia	1	1	0	0	0	1	0.64	0.02
Phrodus (E)	1	1	0	1	0	0	0.64	0.02
Physalis	3	3	0	0	0	3	1.91	0.07
Reyesia	4	4	0	3	1	0	2.55	0.09
Salpichroa	1	1	0	0	1	0	0.64	0.02
Salpiglossis	2	2	0	1	1	0	1.27	0.05
Schizanthus	12	12	0	11	1	0	7.64	0.27
Solanum	69	55	14	33	32	4	43.95	1.56
Vestia (E)	1	1	0	1	0	0	0.64	0.02
Subtotal	157	135	22	67	78	12	100.00	3.54
STERCULIACEAE								
Waltheria	1	1	0	0	0	1	100.00	0.02
Subtotal	1	1	0	0	0	1	100.00	0.02
STYLIDIACEAE								
Phyllachne	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
TETRACHONDRACEAE								
Tetrachondra	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
THYMELAEACEAE								
Drapetes	1	1	0	0	1	0	33.33	0.02
Ovidia	2	2	0	1	1	0	66.67	0.05
Subtotal	3	3	0	1	2	0	100.00	0.07
TROPAEOLACEAE								
Tropaeolum	18	18	0	15	2	1	100.00	0.41
Subtotal	18	18	0	15	2	1	100.00	0.41
UMBELLIFERAE								
Ammi	1	1	0	0	0	1	0.93	0.02
Anthriscus	1	1	0	0	0	1	0.93	0.02
Apium	10	9	1	3	5	2	9.26	0.23
Asteriscium	4	4	0	4	0	0	3.70	0.09
Azorella	14	14	0	1	13	0	12.96	0.32
Bolax	2	2	0	0	2	0	1.85	0.05
Bowlesia	6	6	0	3	3	0	5.56	0.14
Centella	1	1	0	1	0	0	0.93	0.02
Conium	1	1	0	0	0	1	0.93	0.02
Daucus	4	4	0	0	2	2	3.70	0.09
Diposis	1	1	0	1	0	0	0.93	0.02
Domeykoa	2	2	0	2	0	0	1.85	0.05
Eremocharis	1	1	0	1	0	0	0.93	0.02
Eryngium	10	10	0	8	2	0	9.26	0.23
Foeniculum	1	1	0	0	0	1	0.93	0.02

	NT	NS	NI	EN	NA	AD	%F	%D
Gymnophyton	5	5	0	5	0	0	4.63	0.11
Homalocarpus (E)	6	6	0	6	0	0	5.56	0.14
Huanaca	4	4	0	0	4	0	3.70	0.09
Hydrocotyle	8	8	0	2	6	0	7.41	0.18
Laretia	1	1	0	0	1	0	0.93	0.02
Lilaeopsis	1	1	0	0	1	0	0.93	0.02
Mulinum	8	7	1	4	4	0	7.41	0.18
Oreomyrrhis	1	1	0	0	1	0	0.93	0.02
Osmorhiza	3	3	0	0	3	0	2.78	0.07
Pastinaca	1	1	0	0	0	1	0.93	0.02
Pozoa	2	2	0	0	2	0	1.85	0.05
Sanicula	2	2	0	0	2	0	1.85	0.05
Scandix	1	1	0	0	0	1	0.93	0.02
Schizeilema	1	1	0	0	1	0	0.93	0.02
Seseli	1	1	0	0	0	1	0.93	0.02
Sium	1	1	0	0	0	1	0.93	0.02
Smyrnium	1	1	0	0	0	1	0.93	0.02
Torilis	2	2	0	0	0	2	1.85	0.05
Subtotal	108	106	2	41	52	15	100.00	2.44
URTICACEAE								
Parietaria	3	1	2	0	3	0	18.75	0.07
Pilea	2	2	0	2	0	0	12.50	0.05
Soleirolia	1	1	0	0	0	1	6.25	0.02
Urtica	10	9	1	1	7	2	62.50	0.23
Subtotal	16	13	3	3	10	3	100.00	0.37
VALERIANACEAE								
Plectritis	1	1	0	1	0	0	2.13	0.02
Stangea	1	1	0	0	1	0	2.13	0.02
Valeriana	43	43	0	29	14	0	91.49	0.97
Valerianella	2	2	0	0	0	2	4.26	0.05
Subtotal	47	47	0	30	15	2	100.00	1.06
VERBENACEAE								
Acantholippia	3	3	0	2	1	0	3.06	0.07
Aloysia	4	3	1	4	0	0	4.08	0.09
Diostea	1	1	0	0	1	0	1.02	0.02
Junellia	32	31	1	11	21	0	32.65	0.72
Lampaya	1	1	0	0	1	0	1.02	0.02
Lippia	2	2	0	1	1	0	2.04	0.05
Neosparton	1	1	0	0	1	0	1.02	0.02
Phyla	4	3	1	0	0	4	4.08	0.09
Pitraea	1	1	0	0	1	0	1.02	0.02
Rhaphithamnus	1	1	0	0	1	0	1.02	0.02
Urbania	1	1	0	0	1	0	1.02	0.02
Verbena	47	34	13	24	22	1	47.96	1.06
Subtotal	98	82	16	42	51	5	100.00	2.20
VIOLACEAE								
Hybanthus	1	1	0	1	0	0	0.99	0.02
Viola	100	73	27	69	28	3	99.01	2.27
Subtotal	101	74	27	70	28	3	100.00	2.29
VITACEAE								
Cissus	1	1	0	0	1	0	100.00	0.02
Subtotal	1	1	0	0	1	0	100.00	0.02
VIVIANIACEAE								
Araeoandra (E)	1	1	0	1	0	0	20.00	0.02

	NT	NS	NI	EN	NA	AD	%F	%D
Cissarobryon (E)	1	1	0	1	0	0	20.00	0.02
Viviania	3	3	0	2	1	0	60.00	0.07
Subtotal	5	5	0	4	1	0	100.00	0.11
WINTERACEAE								
Drimys	3	1	2	0	3	0	100.00	0.07
Subtotal	3	1	2	0	3	0	100.00	0.07
ZYGOPHYLLACEAE								
Bulnesia	1	1	0	1	0	0	9.09	0.02
Fagonia	3	2	1	1	2	0	27.27	0.07
Larrea	3	3	0	0	3	0	27.27	0.07
Metharme (E)	1	1	0	1	0	0	9.09	0.02
Pintoa (E)	1	1	0	1	0	0	9.09	0.02
Porlieria	1	1	0	1	0	0	9.09	0.02
Tribulus	1	1	0	0	0	1	9.09	0.02
Subtotal	11	10	1	5	5	1	100.00	0.24
Total	4414	3906	508	2182	1756	476		100.00

MONOCOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ALISMATACEAE								
Alisma	1	1	0	0	1	0	50.00	0.08
Sagittaria	1	1	0	1	0	0	50.00	0.08
Subtotal	2	2	0	1	1	0	100.00	0.16
AMARYLLIDACEAE								
Alstroemeria	42	31	11	37	5	0	45.65	3.54
Bomarea	3	3	0	1	2	0	3.26	0.25
Famatina	2	2	0	2	0	0	2.17	0.17
Hippeastrum	24	24	0	22	2	0	26.09	2.03
Leontochir (E)	1	1	0	1	0	0	1.09	0.08
Phycella	2	2	0	2	0	0	2.17	0.17
Placea (E)	7	7	0	7	0	0	7.61	0.59
Rhodophiala	9	9	0	6	3	0	9.78	0.76
Stenomesson	1	1	0	1	0	0	1.09	0.08
Traubia (E)	1	1	0	1	0	0	1.09	0.08
Subtotal	92	81	11	80	12	0	100.00	7.75
APONOGETONACEAE								
Aponogeton	1	1	0	0	0	1	100.00	0.08
Subtotal	1	1	0	0	0	1	100.00	0.08
ARACEAE								
Pistia	1	1	0	0	0	1	100.00	0.08
Subtotal	1	1	0	0	0	1	100.00	0.08
BROMELIACEAE								
Deuterocohnia	1	1	0	1	0	0	4.00	0.08
Fascicularia (E)	5	5	0	5	0	0	20.00	0.42
Greigia	2	2	0	2	0	0	8.00	0.17
Ochagavia (e)	2	2	0	2	0	0	8.00	0.17
Puya	10	7	3	10	0	0	40.00	0.84
Tillandsia	5	4	1	1	4	0	20.00	0.42
Subtotal	25	21	4	21	4	0	100.00	2.10

	NT	NS	NI	EN	NA	AD	%F	%D
CENTROLEPIDACEAE								
Gaimardia	1	1	0	0	1	0	100.00	0.08
Subtotal	1	1	0	0	1	0	100.00	0.08
COMMELINACEAE								
Tradescantia	1	1	0	0	0	1	100.00	0.08
Subtotal	1	1	0	0	0	1	100.00	0.08
CORSIACEAE								
Arachnitis	1	1	0	0	1	0	100.00	0.08
Subtotal	1	1	0	0	1	0	100.00	0.08
CYPERACEAE								
Bulbostylis	1	1	0	0	1	0	0.57	0.08
Carex	79	55	24	16	62	1	45.14	6.67
Carpha	1	1	0	0	1	0	0.57	0.08
Cyperus	29	26	3	5	16	8	16.57	2.45
Eleocharis	19	19	0	1	15	3	10.86	1.60
Oreobolus	1	1	0	0	1	0	0.57	0.08
Rhynchospora	1	1	0	0	1	0	0.57	0.08
Schoenus	4	4	0	1	3	0	2.29	0.34
Scirpus	25	20	5	5	18	2	14.29	2.11
Uncinia	15	10	5	4	11	0	8.57	1.27
Subtotal	175	138	37	32	129	14	100.00	14.76
DIOSCOREACEAE								
Dioscorea	46	41	5	45	1	0	93.88	3.88
Epipetrum (E)	3	3	0	3	0	0	6.12	0.25
Subtotal	49	44	5	48	1	0	100.00	4.13
GRAMINEAE								
Agrostis	33	31	2	7	19	7	5.55	2.78
Aira	3	3	0	0	0	3	0.50	0.25
Alopecurus	8	7	1	2	3	3	1.34	0.68
Ammophila	1	1	0	0	0	1	0.17	0.08
Amphibromus	1	1	0	0	1	0	0.17	0.08
Anthochloa	1	1	0	0	1	0	0.17	0.08
Anthoxanthum	8	8	0	2	5	1	1.34	0.68
Apera	1	1	0	0	0	1	0.17	0.08
Aristida	4	3	1	0	3	1	0.67	0.34
Arrhenatherum	2	1	1	0	0	2	0.34	0.17
Arundo	1	1	0	0	0	1	0.17	0.08
Avena	5	5	0	0	0	5	0.84	0.42
Bothriochloa	3	3	0	0	0	3	0.50	0.25
Bouteloua	1	1	0	0	1	0	0.17	0.08
Brachypodium	1	1	0	0	0	1	0.17	0.08
Briza	2	2	0	0	0	2	0.34	0.17
Bromelica	1	1	0	0	1	0	0.17	0.08
Bromidium	2	2	0	1	1	0	0.34	0.17
Bromus	27	24	3	2	12	13	4.54	2.28
Calamagrostis	7	7	0	0	6	1	1.18	0.59
Calotheca	1	1	0	0	1	0	0.17	0.08
Catabrosa	2	2	0	0	1	1	0.34	0.17
Cenchrus	4	4	0	0	0	4	0.67	0.34
Chaetotropis	3	3	0	0	3	0	0.50	0.25
Chascolytrum	1	1	0	0	1	0	0.17	0.08
Chloris	3	3	0	0	0	3	0.50	0.25
Chusquea	11	11	0	7	4	0	1.85	0.93
Cinna	1	1	0	1	0	0	0.17	0.08
Cortaderia	9	6	3	2	7	0	1.51	0.76
Cymbopogon	1	1	0	0	0	1	0.17	0.08
Cynodon	6	6	0	1	4	1	1.01	0.51
Cynosurus	2	2	0	0	0	2	0.34	0.17
Dactylis	1	1	0	0	0	1	0.17	0.08
Danthonia	10	9	1	6	4	0	1.68	0.84
Deschampsia	20	17	3	7	12	1	3.36	1.69
Desmazeria	1	1	0	0	0	1	0.17	0.08
Deyeuxia	23	22	1	3	20	0	3.87	1.94
Dichanthelium	1	1	0	0	1	0	0.17	0.08
Dielsiochloa	1	1	0	0	1	0	0.17	0.08
Digitaria	3	3	0	0	0	3	0.50	0.25
Diplachne	3	3	0	0	3	0	0.50	0.25
Dissanthelium	1	1	0	0	1	0	0.17	0.08
Distichlis	5	3	2	0	5	0	0.84	0.42
Echinochloa	6	4	2	0	0	6	1.01	0.51
Ehrharta	1	1	0	0	0	1	0.17	0.08
Eleusine	1	1	0	0	0	1	0.17	0.08
Elymus	21	21	0	11	10	0	3.53	1.77
Elytrigia	1	1	0	0	0	1	0.17	0.08
Enneapogon	1	1	0	0	1	0	0.17	0.08
Eragrostis	10	10	0	0	6	4	1.68	0.84
Eriochloa	2	2	0	0	0	2	0.34	0.17
Eustachys	1	1	0	0	0	1	0.17	0.08
Festuca	28	28	0	5	19	4	4.71	2.36
Gastridium	2	2	0	0	0	2	0.34	0.17
Glyceria	2	2	0	0	1	1	0.34	0.17
Gymnachne (E)	1	1	0	1	0	0	0.17	0.08
Gynerium	1	1	0	0	0	1	0.17	0.08
Hainardia	1	1	0	0	0	1	0.17	0.08
Helictotrichon	1	1	0	0	1	0	0.17	0.08
Holcus	2	2	0	0	0	2	0.34	0.17
Hordeum	18	15	3	0	14	4	3.03	1.52
Imperata	4	4	0	1	3	0	0.67	0.34
Koeleria	2	2	0	0	2	0	0.34	0.17
Lagurus	1	1	0	0	0	1	0.17	0.08
Lamarckia	1	1	0	0	0	1	0.17	0.08
Leptophyllochloa	1	1	0	0	1	0	0.17	0.08
Leymus	1	1	0	0	0	1	0.17	0.08
Lolium	5	5	0	0	0	5	0.84	0.42
Lophochloa	1	1	0	0	0	1	0.17	0.08
Melica	7	7	0	7	0	0	1.18	0.59
Microchloa	1	1	0	0	0	1	0.17	0.08
Miscanthus	1	1	0	0	0	1	0.17	0.08
Muhlenbergia	3	3	0	0	3	0	0.50	0.25
Munroa	2	2	0	0	2	0	0.34	0.17
Nassella	11	10	1	5	6	0	1.85	0.93
Neobouteloua	1	1	0	0	1	0	0.17	0.08
Panicum	4	4	0	0	2	2	0.67	0.34
Parapholis	2	2	0	0	0	2	0.34	0.17
Parodiochloa	1	1	0	0	1	0	0.17	0.08
Paspalum	7	7	0	0	5	2	1.18	0.59
Pennisetum	3	3	0	0	1	2	0.50	0.25
Phalaris	7	7	0	0	2	5	1.18	0.59
Phleum	2	2	0	0	0	2	0.34	0.17
Phragmites	1	1	0	0	1	0	0.17	0.08
Piptatherum	1	1	0	0	0	1	0.17	0.08
Piptochaetium	8	7	1	2	6	0	1.34	0.68
Poa	69	68	1	30	32	7	11.60	5.82
Podagrostis	1	1	0	0	1	0	0.17	0.08
Polypogon	8	8	0	1	3	4	1.34	0.68
Puccinellia	11	11	0	3	8	0	1.85	0.93
Raimundochloa	1	1	0	0	1	0	0.17	0.08
Relchela	1	1	0	0	1	0	0.17	0.08
Rhombolytrum	1	1	0	1	0	0	0.17	0.08
Rytidosperma	4	4	0	0	4	0	0.67	0.34
Schismus	2	2	0	0	0	2	0.34	0.17
Schizachyrium	2	2	0	0	0	2	0.34	0.17

	NT	NS	NI	EN	NA	AD	%F	%D
Setaria	5	5	0	0	1	4	0.84	0.42
Sorghum	2	2	0	0	0	2	0.34	0.17
Spartina	1	1	0	0	1	0	0.17	0.08
Sporobolus	3	3	0	0	1	2	0.50	0.25
Stenotaphrum	1	1	0	0	0	1	0.17	0.08
Stipa	43	43	0	10	33	0	7.23	3.63
Taeniatherum	1	1	0	0	0	1	0.17	0.08
Trichloris	1	1	0	0	1	0	0.17	0.08
Trichoneura	1	1	0	0	1	0	0.17	0.08
Tripogon	1	1	0	0	1	0	0.17	0.08
Trisetum	25	18	7	13	12	0	4.20	2.11
Vahlodea	1	1	0	0	0	1	0.17	0.08
Vulpia	7	6	1	0	3	4	1.18	0.59
Subtotal	595	561	34	131	313	151	100.00	50.01
HYDROCHARITACEAE								
Egeria	1	1	0	0	0	1	25.00	0.08
Elodea	2	2	0	0	1	1	50.00	0.17
Limnobium	1	1	0	0	0	1	25.00	0.08
Subtotal	4	4	0	0	1	3	100.00	0.33
IRIDACEAE								
Calydorea (E)	1	1	0	1	0	0	2.63	0.08
Chamelum	1	1	0	0	1	0	2.63	0.08
Herbertia	1	1	0	0	1	0	2.63	0.08
Libertia	4	4	0	3	1	0	10.53	0.34
Mastigostyla	1	1	0	0	1	0	2.63	0.08
Phaiophleps	3	2	1	1	2	0	7.89	0.25
Sisyrinchium	21	13	8	11	10	0	55.26	1.77
Solenomelus	2	2	0	1	1	0	5.26	0.17
Tapeinia	2	2	0	0	2	0	5.26	0.17
Tigridia	1	1	0	1	0	0	2.63	0.08
Tritonia	1	1	0	0	0	1	2.63	0.08
Subtotal	38	29	9	18	19	1	100.00	3.18
JUNCACEAE								
Distichia	2	2	0	0	2	0	3.77	0.17
Juncus	38	28	10	5	33	0	71.70	3.21
Luzula	7	6	1	2	5	0	13.21	0.59
Marsippospermum	3	3	0	0	3	0	5.66	0.25
Oxychloe	1	1	0	0	1	0	1.89	0.08
Patosia	1	1	0	0	1	0	1.89	0.08
Rostkovia	1	1	0	0	1	0	1.89	0.08
Subtotal	53	42	11	7	46	0	100.00	4.46
JUNCAGINACEAE								
Tetroncium	1	1	0	0	1	0	25.00	0.08
Triglochin	3	3	0	0	3	0	75.00	0.25
Subtotal	4	4	0	0	4	0	100.00	0.33
LEMNACEAE								
Lemna	3	3	0	0	3	0	50.00	0.25
Spirodela	2	2	0	0	2	0	33.33	0.17
Wolffiella	1	1	0	0	1	0	16.67	0.08
Subtotal	6	6	0	0	6	0	100.00	0.50
LILAEACEAE								
Lilaea	1	1	0	0	1	0	100.00	0.08
Subtotal	1	1	0	0	1	0	100.00	0.08

	NT	NS	NI	EN	NA	AD	%F	%D
LILIACEAE								
Allium	1	1	0	[illegible]	[illegible]	1	[illegible]	0.08
Ancrumia	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Asphodelus	1	1	0	[illegible]	[illegible]	1	[illegible]	0.08
Astelia	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Erinna (E)	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Fortunatia	2	2	0	[illegible]	[illegible]	0	[illegible]	0.17
Garaventia (E)	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Gethyum (E)	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Gilliesia (E)	5	5	0	[illegible]	[illegible]	0	[illegible]	0.42
Herreria	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Ipheion	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Leucocoryne (E)	12	11	1	[illegible]	[illegible]	0	[illegible]	1.01
Miersia	3	3	0	[illegible]	[illegible]	0	[illegible]	0.25
Nothoscordum	6	6	0	[illegible]	[illegible]	1	[illegible]	0.51
Pabellonia (E)	2	2	0	[illegible]	[illegible]	0	[illegible]	0.17
Pasithea	2	1	1	[illegible]	[illegible]	0	[illegible]	0.17
Solaria	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Speea (E)	2	2	0	[illegible]	[illegible]	0	[illegible]	0.17
Trichopetalum (E)	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Tristagma	4	3	1	[illegible]	[illegible]	0	[illegible]	0.34
Zoellnerallium	1	1	0	[illegible]	[illegible]	0	[illegible]	0.08
Subtotal	50	47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.17
LIMNOCHARITACEAE								
Hydrocleys	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.08
Subtotal	1	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ORCHIDACEAE								
Aa	1	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]	[illegible]
Bipinnula	4	4	[illegible]	4	0	[illegible]	[illegible]	[illegible]
Brachystele	1	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]
Chloraea	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Codonorchis	1	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]
Gavilea	[illegible]	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]
Habenaria	1	[illegible]	[illegible]	0	1	[illegible]	[illegible]	[illegible]
Subtotal	47	[illegible]	[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]
PALMAE								
Jubaea (E)	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.08
Subtotal	1	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.08
PHILESIACEAE								
Lapageria (E)	1	1	[illegible]	1	0	[illegible]	[illegible]	0.08
Luzuriaga	[illegible]	[illegible]	[illegible]	1	2	[illegible]	[illegible]	0.25
Philesia	1	1	[illegible]	[illegible]	1	[illegible]	[illegible]	0.08
Subtotal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41
PONTEDERIACEAE								
Eichhornia	1	1	[illegible]	0	0	1	[illegible]	0.08
Subtotal	1	1	[illegible]	0	[illegible]	1	[illegible]	0.08
POTAMOGETONACEAE								
Potamogeton	[illegible]	[illegible]	0	1	[illegible]	[illegible]	[illegible]	0.76
Subtotal	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	0.76
RESTIONACEAE								
Leptocarpus	1	1	0	1	[illegible]	0	100.00	0.08
Subtotal	1	1	0	1	0	[illegible]	100.00	0.08

	NT	NS	NI	EN	NA	AD	%F	%D
RUPPIACEAE								
Ruppia	2	2	0	1	1	0	100.00	0.17
Subtotal	2	2	0	1	1	0	100.00	0.17
TECOPHILAEACEAE								
Conanthera (E)	11	11	0	11	0	0	73.33	0.93
Tecophilaea (E)	3	2	1	3	0	0	20.00	0.25
Zephyra (E)	1	1	0	1	0	0	6.67	0.08
Subtotal	15	14	1	15	0	0	100.00	1.26
TYPHACEAE								
Typha	2	2	0	0	2	0	100.00	0.17
Subtotal	2	2	0	0	2	0	100.00	0.17
ZANNICHELLIACEAE								
Zannichellia	1	1	0	0	1	0	100.00	0.08
Subtotal	1	1	0	0	1	0	100.00	0.08
ZOSTERACEAE								
Heterozostera	1	1	0	0	1	0	100.00	0.08
Subtotal	1	1	0	0	1	0	100.00	0.08
Total	1185	1069	116	424	584	177		100.00

RESUMEN DE LA FLORA VASCULAR DE CHILE CONTINENTAL

	NF	NG	GE	NT	NS	NI	EN	NA	AD	%F
PTERI	18	42	0	124	114	10	19	101	4	2.16
GYMNO	4	9	1	16	16	0	5	11	0	0.28
DICOT	132	743	46	4414	3906	508	2182	1756	476	76.93
MONOC	30	214	20	1185	1069	116	424	584	177	20.66
Total	184	1008	67	5739	5105	634	2630	2452	657	100.00

PORCENTAJES DE ENDEMICAS, NATIVAS Y ADVENTICIAS

	En la flora total			En la división o clase		
	EN	NA	AD	EN	NA	AD
PTERI	0.33	1.76	0.07	15.32	81.45	3.24
GYMNO	0.09	0.19	0.00	31.25	68.75	0.00
DICOT	38.02	30.60	8.29	49.43	39.78	10.78
MONOC	7.39	10.18	3.08	35.78	49.28	14.94
Total	45.83	42.73	11.44			

Las siguientes son las familias con NT mayor de 100 en la flora de Chile continental

FAM	NT	% de la flora
COMPOSITAE	1033	18.00
GRAMINEAE	595	10.37
PAPILIONACEAE	321	5.59
CACTACEAE	250	4.36
CRUCIFERAE	222	3.87
SCROPHULARIACEAE	182	3.17
CYPERACEAE	175	3.05
SOLANACEAE	157	2.74
MALVACEAE	132	2.30
OXALIDACEAE	128	2.23
BORAGINACEAE	116	2.02
UMBELLIFERAE	108	1.88
CARYOPHYLLACEAE	103	1.79
VIOLACEAE	101	1.76

Los 10 géneros con mayor NT son:

Senecio	COMPOS	252
Adesmia	PAPILI	138
Neoporteria	CACTAC	133
Oxalis	OXALID	128
Viola	VIOLAC	100
Calceolaria	SCROPH	92
Carex	CYPERA	79
Solanum	SOLANA	69
Poa	GRAMIN	69
Calandrinia	PORTUL	68

El número de géneros con determinado NT se muestra en la siguiente tabla:

NT	Número de géneros	%
1	496	49.21
2	151	14.98
3	67	6.65
4	61	6.05
5	35	1.78
6	18	3.47
7	22	1.78
8	20	2.18
9	8	0.79
10	16	...etc.
11	8	
12	10	
13	4	
14	7	
15	3	
16	1	
17	4	
18	4	
19	3	
20	3	
21-50	52	
51-100	10	
> 100	4	

FAMILIA ENDEMICA: Gomortegaceae.

GENEROS ENDEMICOS:
PTERIDOPHYTA

HYMENOPHYLLACEAE: *Hymenoglossum* (e)

GYMNOSPERMAE

PODOCARPACEAE: *Lepidothamnus.*

DICOTYLEDONEAE

CACTACEAE: *Copiapoa, Eriosyce.*
CAESALPINIACEAE: *Balsamocarpon.*
CAMPANULACEAE: *Cyphocarpus.*
CARYOPHYLLACEAE: *Microphyes.*
COMPOSITAE: *Acrisione, Calopappus, Gypothamnium, Leptocarpha, Marticorenia, Moscharia, Oxyphyllum, Pleocarphus, Podanthus.*
CRUCIFERAE: *Agallis, Hollermayera, Ivania.*
EUPHORBIACEAE: *Adenopeltis, Avellanita.*
GESNERIACEAE: *Sarmienta.*
GOMORTEGACEAE: *Gomortega.*
LARDIZABALACEAE: *Lardizabala.*
LOASACEAE: *Scyphanthus.*
LORANTHACEAE: *Desmaria, Notanthera.*
MALPIGHIACEAE: *Dinemagonum, Dinemandra.*
MONIMIACEAE: *Peumus.*
MYRTACEAE: *Legrandia.*
NOLANACEAE: *Alona.*
PHYTOLACCACEAE: *Anisomeria, Ercilla.*
RHAMNACEAE: *Talguenea.*
RUTACEAE: *Pitavia.*
SAPINDACEAE: *Llagunoa.*
SAXIFRAGACEAE: *Francoa, Tetilla, Valdivia.*
SOLANACEAE: *Latua, Phrodus, Vestia.*
UMBELLIFERAE: *Homalocarpus.*
VIVIANIACEAE: *Araeoandra, Cissarobryon.*
ZYGOPHYLLACEAE: *Metharme, Pintoa.*

MONOCOTYLEDONEAE

AMARYLLIDACEAE: *Leontochir, Placea, Traubia.*
BROMELIACEAE: *Fascicularia, Ochagavia* (e).
DIOSCOREACEAE: *Epipetrum.*
GRAMINEAE: *Gymnachne.*
IRIDACEAE: *Calydorea.*
LILIACEAE: *Erinna, Garaventia, Gethyum, Gilliesia, Leucocoryne, Pabellonia, Speea, Trichopetalum.*
PALMAE: *Jubaea.*
PHILESIACEAE: *Lapageria.*
TECOPHILAEACEAE: *Conanthera, Tecophilaea, Zephyra.*

ESTADISTICA DE LA FLORA VASCULAR DE JUAN FERNANDEZ: FAMILIAS

PTERIDOPHYTA

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ADIANT	3	0	5	5	0	2	3	0	8.77	1.33
ASPLEN	1	0	4	4	0	2	2	0	7.02	1.06
BLECHN	1	0	6	6	0	4	2	0	10.53	1.60
DENNST	2	0	2	2	0	0	2	0	3.51	0.53
DICKSO	2	1	3	3	0	3	0	0	5.26	0.80
DRYOPT	6	0	7	6	1	4	3	0	12.28	1.86
GLEICH	1	0	3	3	0	1	2	0	5.26	0.80
HYMENO	4	0	18	16	2	3	15	0	31.58	4.79
LOPHOS	1	0	1	1	0	0	1	0	1.75	0.27
LYCOPO	1	0	2	2	0	0	2	0	3.51	0.53
OPHIOG	1	0	1	1	0	1	0	0	1.75	0.27
P0LYPO	3	0	5	4	1	1	4	0	8.77	1.33
Total	26	1	57	53	4	23	34	0	100.00	15.17

DICOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
AIZOAC	1	0	1	1	0	0	0	1	0.39	0.27
AMARAN	1	0	2	2	0	0	0	2	0.79	0.53
APOCYN	1	0	1	1	0	0	0	1	0.39	0.27
BERBER	1	0	3	2	1	3	0	0	1.18	0.80
BORAGI	2	1	2	2	0	1	0	1	0.79	0.53
CALLIT	1	0	1	1	0	0	1	0	0.39	0.27
CAMPAN	2	0	8	7	1	6	1	1	3.15	2.13
CARYOP	7	0	11	10	1	3	1	7	4.33	2.93
CHENOP	2	0	7	7	0	3	1	3	2.76	1.86
COMPOS	32	5	57	57	0	27	5	25	22.44	15.16
CONVOL	3	0	3	3	0	0	2	1	1.18	0.80
CRUCIF	6	0	10	10	0	1	2	7	3.94	2.66
DIPSAC	1	0	1	1	0	0	0	1	0.39	0.27
ELAEOC	2	0	2	2	0	0	0	2	0.79	0.53
EMPETR	1	0	1	1	0	0	1	0	0.39	0.27
ERICAC	1	0	1	1	0	1	0	0	0.39	0.27
EUPHOR	2	0	3	3	0	1	0	2	1.18	0.80
FLACOU	1	0	1	1	0	1	0	0	0.39	0.27
FUMARI	1	0	1	1	0	0	0	1	0.39	0.27
GENTIA	1	0	1	1	0	0	0	1	0.39	0.27
GERANI	2	0	3	3	0	0	0	3	1.18	0.80
GUNNER	1	0	6	6	0	6	0	0	2.36	1.60
HALORA	1	0	3	2	1	3	0	0	1.18	0.80
LABIAT	4	0	6	5	1	2	0	4	2.36	1.60
LACTOR (E)	1	1	1	1	0	1	0	0	0.39	0.27
LARDIZ	1	0	1	1	0	0	0	1	0.39	0.27
LINACE	1	0	1	1	0	0	0	1	0.39	0.27
LORANT	2	0	2	2	0	0	1	1	0.79	0.53
LYTHRA	1	0	1	1	0	0	0	1	0.39	0.27
MALVAC	3	0	4	4	0	0	0	4	1.57	1.06
MIMOSA	1	0	1	1	0	0	0	1	0.39	0.27
MYRTAC	3	0	5	5	0	3	1	1	1.97	1.33
ONAGRA	1	0	2	2	0	0	0	2	0.79	0.53
OXALID	1	0	2	2	0	0	0	2	0.79	0.53
PAPILI	5	0	11	10	1	3	0	8	4.33	2.93
PHYTOL	1	0	1	1	0	0	0	1	0.39	0.27
PIPERA	1	0	6	4	2	5	1	0	2.36	1.60
PLANTA	1	0	5	5	0	1	2	2	1.97	1.33
POLEMO	2	0	2	2	0	0	2	0	0.79	0.53
POLYGO	2	0	6	6	0	0	0	6	2.36	1.60
PORTUL	1	0	1	1	0	0	1	0	0.39	0.27
PRIMUL	1	0	2	2	0	0	0	2	0.79	0.53
RANUNC	2	0	3	3	0	1	0	2	1.18	0.80
RHAMNA	1	0	1	1	0	1	0	0	0.39	0.27
ROSACE	5	1	8	8	0	3	2	3	3.15	2.13
RUBIAC	4	0	6	6	0	3	2	1	2.36	1.60
RUTACE	2	0	3	3	0	2	0	1	1.18	0.80
SANTAL	1	0	1	1	0	1	0	0	0.39	0.27
SAXIFR	1	0	1	1	0	1	0	0	0.39	0.27
SCROPH	4	0	6	6	0	2	0	4	2.36	1.60
SOLANA	5	0	9	9	0	3	1	5	3.54	2.39
TROPAE	1	0	1	1	0	0	0	1	0.39	0.27

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
UMBELL	10	0	16	16	0	5	2	9	6.30	4.26
URTICA	3	0	7	6	1	4	3	0	2.76	1.86
VERBEN	2	0	2	2	0	1	0	1	0.79	0.53
WINTER	1	0	1	1	0	1	0	0	0.39	0.27
Total	148	8	254	245	9	99	32	123	100.00	67.67

MONOCOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
BROMEL	2	0	2	2	0	2	0	0	3.08	0.53
CYPERA	7	0	13	13	0	4	8	1	20.00	3.46
GRAMIN	25	2	41	41	0	6	7	28	63.08	10.90
IRIDAC	1	0	1	1	0	0	1	0	1.54	0.27
JUNCAC	2	0	6	6	0	1	5	0	9.23	1.60
ORCHID	1	0	1	1	0	1	0	0	1.54	0.27
PALMAE	1	1	1	1	0	1	0	0	1.54	0.27
Total	39	3	65	65	0	15	21	29	100.00	17.30

ESTADISTICA DE LA FLORA DE JUAN FERNANDEZ

PTERIDOPHYTA: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ADIANTACEAE								
Adiantum	1	1	0	0	1	0	20.00	1.75
Notholaena	1	1	0	1	0	0	20.00	1.75
Pteris	3	3	0	1	2	0	60.00	5.26
Subtotal	5	5	0	2	3	0	100.00	8.76
ASPLENIACEAE								
Asplenium	4	4	0	2	2	0	100.00	7.02
Subtotal	4	4	0	2	2	0	100.00	7.02
BLECHNACEAE								
Blechnum	6	6	0	4	2	0	100.00	10.53
Subtotal	6	6	0	4	2	0	100.00	10.53
DENNSTAEDTIACEAE								
Histiopteris	1	1	0	0	1	0	50.00	1.75
Hypolepis	1	1	0	0	1	0	50.00	1.75
Subtotal	2	2	0	0	2	0	100.00	3.50
DICKSONIACEAE								
Dicksonia	2	2	0	2	0	0	66.67	3.51
Thyrsopteris (E)	1	1	0	1	0	0	33.33	1.75
Subtotal	3	3	0	3	0	0	100.00	5.26
DRYOPTERIDACEAE								
Arthropteris	1	1	0	1	0	0	14.29	1.75
Cystopteris	1	1	0	0	1	0	14.29	1.75
Elaphoglossum	1	1	0	0	1	0	14.29	1.75
Megalastrum	2	1	1	1	1	0	28.57	3.51
Polystichum	1	1	0	1	0	0	14.29	1.75
Rumohra	1	1	0	1	0	0	14.29	1.75
Subtotal	7	6	1	4	3	0	100.00	12.26
GLEICHENIACEAE								
Gleichenia	3	3	0	1	2	0	100.00	5.26
Subtotal	3	3	0	1	2	0	100.00	5.26
HYMENOPHYLLACEAE								
Hymenoglossum (e)	1	1	0	0	1	0	5.56	1.75
Hymenophyllum	13	11	2	2	11	0	72.22	22.81
Serpyllopsis	1	1	0	1	0	0	5.56	1.75
Trichomanes	3	3	0	2	1	0	16.67	5.26
Subtotal	18	16	2	5	13	0	100.00	31.57
LOPHOSORIACEAE								
Lophosoria	1	1	0	0	1	0	100.00	1.75
Subtotal	1	1	0	0	1	0	100.00	1.75
LYCOPODIACEAE								
Lycopodium	2	2	0	0	2	0	100.00	3.51
Subtotal	2	2	0	0	2	0	100.00	3.51
OPHIOGLOSSACEAE								
Ophioglossum	1	1	0	1	0	0	100.00	1.75
Subtotal	1	1	0	1	0	0	100.00	1.75
POLYPODIACEAE								
Grammitis	1	1	0	0	1	0	20.00	1.75
Pleopeltis	1	1	0	0	1	0	20.00	1.75
Polypodium	3	2	1	1	2	0	60.00	5.26
Subtotal	5	4	1	1	4	0	100.00	8.76
Total	57	53	4	23	34	0		100.00

DICOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
AIZOACEAE								
Tetragonia	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
AMARANTHACEAE								
Amaranthus	2	2	0	0	0	2	100.00	0.79
Subtotal	2	2	0	0	0	2	100.00	0.79
APOCYNACEAE								
Vinca	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39

	NT	NS	NI	EN	NA	AD	%F	%D
BERBERIDACEAE								
Berberis	3	2	1	3	0	0	100.00	1.18
Subtotal	3	2	1	3	0	0	100.00	1.18
BORAGINACEAE								
Cynoglossum	1	1	0	0	0	1	50.00	0.39
Selkirkia (E)	1	1	0	1	0	0	50.00	0.39
Subtotal	2	2	0	1	0	1	100.00	0.78
CALLITRICHACEAE								
Callitriche	1	1	0	0	1	0	100.00	0.39
Subtotal	1	1	0	0	1	0	100.00	0.39
CAMPANULACEAE								
Lobelia	2	2	0	0	1	1	25.00	0.79
Wahlenbergia	6	5	1	6	0	0	75.00	2.36
Subtotal	8	7	1	6	1	1	100.00	3.15
CARYOPHYLLACEAE								
Cerastium	2	2	0	0	0	2	18.18	0.79
Paronychia	1	1	0	0	1	0	9.09	0.39
Polycarpon	1	1	0	0	0	1	9.09	0.39
Sagina	1	1	0	0	0	1	9.09	0.39
Silene	1	1	0	0	0	1	9.09	0.39
Spergularia	3	2	1	3	0	0	27.27	1.18
Stellaria	2	2	0	0	0	2	18.18	0.79
Subtotal	11	10	1	3	1	7	100.00	4.32
CHENOPODIACEAE								
Chenopodium	6	6	0	3	0	3	85.71	2.36
Sarcocornia	1	1	0	0	1	0	14.29	0.39
Subtotal	7	7	0	3	1	3	100.00	2.75
COMPOSITAE								
Abrotanella	1	1	0	1	0	0	1.75	0.39
Amblyopappus	1	1	0	0	1	0	1.75	0.39
Anthemis	1	1	0	0	0	1	1.75	0.39
Artemisia	1	1	0	0	0	1	1.75	0.39
Bahia	1	1	0	0	1	0	1.75	0.39
Bidens	1	1	0	0	0	1	1.75	0.39
Calendula	1	1	0	0	0	1	1.75	0.39
Carthamus	1	1	0	0	0	1	1.75	0.39
Centaurea	1	1	0	0	0	1	1.75	0.39
Centaurodendron (E)	2	2	0	2	0	0	3.51	0.79
Chrysanthemum	1	1	0	0	0	1	1.75	0.39
Cichorium	1	1	0	0	0	1	1.75	0.39
Cirsium	1	1	0	0	0	1	1.75	0.39
Conyza	1	1	0	0	0	1	1.75	0.39
Cotula	2	2	0	0	0	2	3.51	0.79
Cynara	1	1	0	0	0	1	1.75	0.39
Dendroseris (E)	11	11	0	11	0	0	19.30	4.33
Erigeron	4	4	0	4	0	0	7.02	1.57
Galinsoga	1	1	0	0	0	1	1.75	0.39
Gamochaeta	3	3	0	0	1	2	5.26	1.18
Hypochaeris	2	2	0	0	0	2	3.51	0.79
Lagenophora	1	1	0	0	1	0	1.75	0.39
Lapsana	1	1	0	0	0	1	1.75	0.39
Micropsis	1	1	0	0	1	0	1.75	0.39
Robinsonia (E)	7	7	0	7	0	0	12.28	2.76
Senecio	2	2	0	0	0	2	3.51	0.79

	NT	NS	NI	EN	NA	AD	%F	%D
Silybum	1	1	0	0	0	1	1.75	0.39
Sonchus	2	2	0	0	0	2	3.51	0.79
Taraxacum	1	1	0	1	0	0	1.75	0.39
Xanthium	1	1	0	0	0	1	1.75	0.39
Yunquea (E)	1	1	0	1	0	0	1.75	0.39
Subtotal	57	57	0	27	5	25	100.00	22.37
CONVOLVULACEAE								
Calystegia	1	1	0	0	1	0	33.33	0.39
Convolvulus	1	1	0	0	0	1	33.33	0.39
Dichondra	1	1	0	0	1	0	33.33	0.39
Subtotal	3	3	0	0	2	1	100.00	1.17
CRUCIFERAE								
Brassica	3	3	0	0	0	3	30.00	1.18
Cardamine	3	3	0	1	2	0	30.00	1.18
Lepidium	1	1	0	0	0	1	10.00	0.39
Matthiola	1	1	0	0	0	1	10.00	0.39
Raphanus	1	1	0	0	0	1	10.00	0.39
Rorippa	1	1	0	0	0	1	10.00	0.39
Subtotal	10	10	0	1	2	7	100.00	3.92
DIPSACACEAE								
Dipsacus	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
ELAEOCARPACEAE								
Aristotelia	1	1	0	0	0	1	50.00	0.39
Crinodendron	1	1	0	0	0	1	50.00	0.39
Subtotal	2	2	0	0	0	2	100.00	0.78
EMPETRACEAE								
Empetrum	1	1	0	0	1	0	100.00	0.39
Subtotal	1	1	0	0	1	0	100.00	0.39
ERICACEAE								
Pernettya	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
EUPHORBIACEAE								
Dysopsis	1	1	0	1	0	0	33.33	0.39
Euphorbia	2	2	0	0	0	2	66.67	0.79
Subtotal	3	3	0	1	0	2	100.00	1.18
FLACOURTIACEAE								
Azara	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
FUMARIACEAE								
Fumaria	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
GENTIANACEAE								
Centaurium	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39

	NT	NS	NI	EN	NA	AD	%F	%D
GERANIACEAE								
Erodium	1	1	0	0	0	1	33.33	0.39
Geranium	2	2	0	0	0	2	66.67	0.79
Subtotal	3	3	0	0	0	3	100.00	1.18
GUNNERACEAE								
Gunnera	6	6	0	6	0	0	100.00	2.36
Subtotal	6	6	0	6	0	0	100.00	2.36
HALORAGACEAE								
Haloragis	3	2	1	3	0	0	100.00	1.18
Subtotal	3	2	1	3	0	0	100.00	1.18
LABIATAE								
Cuminia (E)	2	1	1	2	0	0	33.33	0.79
Marrubium	1	1	0	0	0	1	16.67	0.39
Melissa	1	1	0	0	0	1	16.67	0.39
Mentha	2	2	0	0	0	2	33.33	0.79
Subtotal	6	5	1	2	0	4	100.00	2.36
LACTORIDACEAE(E)								
Lactoris (E)	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
LARDIZABALACEAE								
Lardizabala	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
LINACEAE								
Linum	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
LORANTHACEAE								
Notanthera	1	1	0	0	1	0	50.00	0.39
Tristerix	1	1	0	0	0	1	50.00	0.39
Subtotal	2	2	0	0	1	1	100.00	0.78
LYTHRACEAE								
Lythrum	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
MALVACEAE								
Anoda	1	1	0	0	0	1	25.00	0.39
Malva	2	2	0	0	0	2	50.00	0.79
Modiola	1	1	0	0	0	1	25.00	0.39
Subtotal	4	4	0	0	0	4	100.00	1.57
MIMOSACEAE								
Albizia	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
MYRTACEAE								
Myrceugenia	2	2	0	2	0	0	40.00	0.79
Myrteola	1	1	0	0	1	0	20.00	0.39
Ugni	2	2	0	1	0	1	40.00	0.79
Subtotal	5	5	0	3	1	1	100.00	1.97

	NT	NS	NI	EN	NA	AD	%F	%D
ONAGRACEAE								
Oenothera	2	2	0	0	0	2	100.00	0.79
Subtotal	2	2	0	0	0	2	100.00	0.79
OXALIDACEAE								
Oxalis	2	2	0	0	0	2	100.00	0.79
Subtotal	2	2	0	0	0	2	100.00	0.79
PAPILIONACEAE								
Medicago	4	4	0	0	0	4	36.36	1.57
Melilotus	1	1	0	0	0	1	9.09	0.39
Sophora	3	2	1	3	0	0	27.27	1.18
Teline	1	1	0	0	0	1	9.09	0.39
Trifolium	2	2	0	0	0	2	18.18	0.79
Subtotal	11	10	1	3	0	8	100.00	4.32
PHYTOLACCACEAE								
Phytolacca	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
PIPERACEAE								
Peperomia	6	4	2	5	1	0	100.00	2.36
Subtotal	6	4	2	5	1	0	100.00	2.36
PLANTAGINACEAE								
Plantago	5	5	0	1	2	2	100.00	1.97
Subtotal	5	5	0	1	2	2	100.00	1.97
POLEMONIACEAE								
Gilia	1	1	0	0	1	0	50.00	0.39
Microsteris	1	1	0	0	1	0	50.00	0.39
Subtotal	2	2	0	0	2	0	100.00	0.78
POLYGONACEAE								
Polygonum	2	2	0	0	0	2	33.33	0.79
Rumex	4	4	0	0	0	4	66.67	1.57
Subtotal	6	6	0	0	0	6	100.00	2.36
PORTULACACEAE								
Monocosmia	1	1	0	0	1	0	100.00	0.39
Subtotal	1	1	0	0	1	0	100.00	0.39
PRIMULACEAE								
Anagallis	2	2	0	0	0	2	100.00	0.79
Subtotal	2	2	0	0	0	2	100.00	0.79
RANUNCULACEAE								
Anemone	1	1	0	0	0	1	33.33	0.39
Ranunculus	2	2	0	1	0	1	66.67	0.79
Subtotal	3	3	0	1	0	2	100.00	1.18
RHAMNACEAE								
Colletia	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39

	NT	NS	NI	EN	NA	AD	%F	%D
ROSACEAE								
Acaena	3	3	0	1	1	1	37.50	1.18
Fragaria	1	1	0	0	0	1	12.50	0.39
X Margyracaena (E)	1	1	0	1	0	0	12.50	0.39
Margyricarpus	1	1	0	1	0	0	12.50	0.39
Rubus	2	2	0	0	1	1	25.00	0.79
Subtotal	8	8	0	3	2	3	100.00	3.14
RUBIACEAE								
Coprosma	2	2	0	2	0	0	33.33	0.79
Galium	2	2	0	1	0	1	33.33	0.79
Hedyotis	1	1	0	0	1	0	16.67	0.39
Nertera	1	1	0	0	1	0	16.67	0.39
Subtotal	6	6	0	3	2	1	100.00	2.36
RUTACEAE								
Fagara	2	2	0	2	0	0	66.67	0.79
Ruta	1	1	0	0	0	1	33.33	0.39
Subtotal	3	3	0	2	0	1	100.00	1.18
SANTALACEAE								
Santalum	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
SAXIFRAGACEAE								
Escallonia	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
SCROPHULARIACEAE								
Euphrasia	1	1	0	1	0	0	16.67	0.39
Mimulus	1	1	0	1	0	0	16.67	0.39
Verbascum	1	1	0	0	0	1	16.67	0.39
Veronica	3	3	0	0	0	3	50.00	1.18
Subtotal	6	6	0	2	0	4	100.00	2.35
SOLANACEAE								
Cestrum	1	1	0	0	0	1	11.11	0.39
Datura	1	1	0	0	0	1	11.11	0.39
Nicotiana	2	2	0	1	0	1	22.22	0.79
Physalis	1	1	0	0	0	1	11.11	0.39
Solanum	4	4	0	2	1	1	44.44	1.57
Subtotal	9	9	0	3	1	5	100.00	3.53
TROPAEOLACEAE								
Tropaeolum	1	1	0	0	0	1	100.00	0.39
Subtotal	1	1	0	0	0	1	100.00	0.39
UMBELLIFERAE								
Ammi	1	1	0	0	0	1	6.25	0.39
Anethum	1	1	0	0	0	1	6.25	0.39
Apium	4	4	0	1	0	3	25.00	1.57
Centella	1	1	0	0	1	0	6.25	0.39
Coriandrum	1	1	0	0	0	1	6.25	0.39
Daucus	1	1	0	0	0	1	6.25	0.39
Eryngium	4	4	0	4	0	0	25.00	1.57
Petroselinum	1	1	0	0	0	1	6.25	0.39
Sanicula	1	1	0	0	1	0	6.25	0.39
Torilis	1	1	0	0	0	1	6.25	0.39
Subtotal	16	16	0	5	2	9	100.00	6.26
URTICACEAE								
Boehmeria	1	1	0	1	0	0	14.29	0.39
Parietaria	3	2	1	1	2	0	42.86	1.18
Urtica	3	3	0	2	1	0	42.86	1.18
Subtotal	7	6	1	4	3	0	100.00	2.75
VERBENACEAE								
Rhaphithamnus	1	1	0	1	0	0	50.00	0.39
Verbena	1	1	0	0	0	1	50.00	0.39
Subtotal	2	2	0	1	0	1	100.00	0.78
WINTERACEAE								
Drimys	1	1	0	1	0	0	100.00	0.39
Subtotal	1	1	0	1	0	0	100.00	0.39
Total	254	245	9	99	32	123		100.00

MONOCOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
BROMELIACEAE								
Greigia	1	1	0	1	0	0	50.00	1.54
Ochagavia (e)	1	1	0	1	0	0	50.00	1.54
Subtotal	2	2	0	2	0	0	100.00	3.08
CYPERACEAE								
Carex	2	2	0	1	1	0	15.38	3.08
Cyperus	2	2	0	0	1	1	15.38	3.08
Eleocharis	1	1	0	0	1	0	7.69	1.54
Machaerina	1	1	0	1	0	0	7.69	1.54
Oreobolus	1	1	0	0	1	0	7.69	1.54
Scirpus	2	2	0	0	2	0	15.38	3.08
Uncinia	4	4	0	2	2	0	30.77	6.15
Subtotal	13	13	0	4	8	1	100.00	20.01
GRAMINEAE								
Agrostis	2	2	0	1	0	1	4.88	3.08
Aira	2	2	0	0	0	2	4.88	3.08
Anthoxanthum	1	1	0	0	0	1	2.44	1.54
Avena	1	1	0	0	0	1	2.44	1.54
Briza	2	2	0	0	0	2	4.88	3.08
Bromus	3	3	0	0	0	3	7.32	4.62
Chaetotropis	2	2	0	1	1	0	4.88	3.08
Chascolytrum	1	1	0	0	0	1	2.44	1.54
Chusquea	1	1	0	1	0	0	2.44	1.54
Danthonia	1	1	0	0	0	1	2.44	1.54
Gastridium	1	1	0	0	0	1	2.44	1.54
Hordeum	3	3	0	0	0	3	7.32	4.62
Leptophyllochloa	1	1	0	0	1	0	2.44	1.54
Lolium	1	1	0	0	0	1	2.44	1.54
Megalachne (E)	2	2	0	2	0	0	4.88	3.08
Paspalum	2	2	0	0	1	1	4.88	3.08
Phalaris	2	2	0	0	0	2	4.88	3.08
Piptochaetium	1	1	0	0	1	0	2.44	1.54
Poa	2	2	0	0	0	2	4.88	3.08
Podophorus (E)	1	1	0	1	0	0	2.44	1.54

	NT	NS	NI	EN	NA	AD	%F	%D
Polypogon	1	1	0	0	0	1	2.44	1.54
Setaria	2	2	0	0	0	2	4.88	3.08
Stipa	2	2	0	0	2	0	4.88	3.08
Trisetum	1	1	0	0	1	0	2.44	1.54
Vulpia	3	3	0	0	0	3	7.32	4.62
Subtotal	41	41	0	6	7	28	100.00	63.14
IRIDACEAE								
Libertia	1	1	0	0	1	0	100.00	1.54
Subtotal	1	1	0	0	1	0	100.00	1.54
JUNCACEAE								
Juncus	5	5	0	0	5	0	83.33	7.69
Luzula	1	1	0	1	0	0	16.67	1.54
Subtotal	6	6	0	1	5	0	100.00	9.23
ORCHIDACEAE								
Gavilea	1	1	0	1	0	0	100.00	1.54
Subtotal	1	1	0	1	0	0	100.00	1.54
PALMAE								
Juania (E)	1	1	0	1	0	0	100.00	1.54
Subtotal	1	1	0	1	0	0	100.00	1.54
Total	65	65	0	15	21	29		100.00

RESUMEN DE LA FLORA VASCULAR DE JUAN FERNANDEZ

	NF	NG	GE	NT	NS	NI	EN	NA	AD	%F
PTERI	12	26	1	57	53	4	23	34	0	15.17
DICOT	56	148	8	254	245	9	99	32	123	67.67
MONOC	7	39	3	65	65	0	15	22	28	17.30
Total	75	213	12	376	363	13	137	88	151	100.00

PORCENTAJES DE ENDEMICAS NATIVAS Y ADVENTICIAS

	En la flora total			En la división o clase		
	EN	NA	AD	EN	NA	AD
PTERI	6.12	9.04	0.00	40.35	59.65	0.00
DICOT	26.33	8.51	32.71	38.98	12.60	48.42
MONOC	3.99	5.85	7.45	36.44	23.40	40.16
Total	36.44	23.40	40.16			

Las familias con mayor NT en Juan Fernández son las siguientes:

FAM	NT	% en la flora
COMPOSITAE	57	15.19
GRAMINEAE	41	10.90
HYMENOPHYLLACEAE	18	4.79
UMBELLIFERAE	16	4.26
CYPERACEAE	13	3.46
CARYOPHYLLACEAE	11	2.93
PAPILIONACEAE	11	2.93
CRUCIFERAE	10	2.66

Los géneros con más alto NT son:

Hymenophyllum	HYMENO	13
Dendroseris	COMPOS	11
Robinsonia	COMPOS	7
Blechnum	BLECHN	6
Chenopodium	CHENOP	6
Gunnera	GUNNER	6
Peperomia	PIPERA	6
Wahlenbergia	CAMPAN	6

El número de géneros con determinado NT es el siguiente:

NT	Número de géneros	%
1	133	62.44
2	43	20.19
3	18	8.45
4	8	3.76
5	2	1.88
6	5	2.35
7	1	0.47
11	1	0.47
13	1	0.47

FAMILIA ENDÉMICA: *Lactoridaceae.*
GENEROS ENDEMICOS:

PTERIDOPHYTA
DICKSONIACEAE: *Thyrsopteris.*
HYMENOPHYLLACEAE: *Hymenoglossum* (e).

DICOTYLEDONEAE
BORAGINACEAE: *Selkirkia.*
COMPOSITAE: *Centaurodendron, Dendroseris, Robinsonia, Yunquea.*
LABIATAE: *Cuminia.*
LACTORIDACEAE: *Lactoris.*
ROSACEAE: *X Margyracaena.*

MONOCOTYLEDONEAE
GRAMINEAE: *Megalachne, Podophorus.*
PALMAE: *Juania.*

ESTADISTICA DE LA FLORA VASCULAR DE ISLAS DESVENTURADAS: FAMILIAS

DICOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
AIZOAC	1	0	2	2	0	0	1	1	6.45	6.06
BORAGI	1	1	1	1	0	1	0	0	3.23	3.03
CARYOP	2	1	3	3	0	1	1	1	9.68	9.09
CHENOP	3	0	7	7	0	5	0	2	22.58	21.21
COMPOS	4	2	7	6	1	3	0	4	22.58	21.21
CRUCIF	1	0	1	1	0	1	0	0	3.23	3.03
CUCURB	1	0	1	1	0	1	0	0	3.23	3.03
FRANKE	1	0	1	1	0	1	0	0	3.23	3.03
MALVAC	4	0	5	5	0	3	0	2	16.13	15.15
PLANTA	1	0	1	1	0	1	0	0	3.23	3.03
SOLANA	1	0	1	1	0	0	1	0	3.23	3.03
URTICA	1	0	1	1	0	1	0	0	3.23	3.03
Total	21	4	31	30	1	18	3	10	100.00	93.93

MONOCOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
GRAMIN	1	0	2	2	0	1	1	0	100.00	6.06
Total	1	0	2	2	0	1	1	0	100.00	6.06

ESTADISTICA DE LA FLORA DE ISLAS DESVENTURADAS

DICOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
AIZOACEAE								
Tetragonia	2	2	0	0	1	1	100.00	6.45
Subtotal	2	2	0	0	1	1	100.00	6.45
BORAGINACEAE								
Nesocaryum (E)	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
CARYOPHYLLACEAE								
Sanctambrosia (E)	1	1	0	1	0	0	33.33	3.23
Spergularia	2	2	0	1	0	1	66.67	6.45
Subtotal	3	3	0	2	0	1	100.00	9.68
CHENOPODIACEAE								
Atriplex	2	2	0	2	0	0	28.57	6.45
Chenopodium	3	3	0	1	0	2	42.86	9.68
Suaeda	2	2	0	2	0	0	28.57	6.45
Subtotal	7	7	0	5	0	2	100.00	22.58
COMPOSITAE								
Cotula	2	2	0	0	0	2	28.57	6.45
Lycapsus (E)	1	1	0	1	0	0	14.29	3.23
Sonchus	2	2	0	0	0	2	28.57	6.45
Thamnoseris (E)	2	1	1	2	0	0	28.57	6.45
Subtotal	7	6	1	3	0	4	100.00	22.58
CRUCIFERAE								
Lepidium	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
CUCURBITACEAE								
Sicyos	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
FRANKENIACEAE								
Frankenia	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
MALVACEAE								
Cristaria	2	2	0	2	0	0	40.00	6.45
Lavatera	1	1	0	0	0	1	20.00	3.23
Malva	1	1	0	0	0	1	20.00	3.23
Urocarpidium	1	1	0	1	0	0	20.00	3.23
Subtotal	5	5	0	3	0	2	100.00	16.14
PLANTAGINACEAE								
Plantago	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
SOLANACEAE								
Solanum	1	1	0	0	1	0	100.00	3.23
Subtotal	1	1	0	0	1	0	100.00	3.23
URTICA								
Parietaria	1	1	0	1	0	0	100.00	3.23
Subtotal	1	1	0	1	0	0	100.00	3.23
Total	31	30	1	19	2	10		100.00

MONOCOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
GRAMINEAE								
Eragrostis	2	2	0	1	1	0	100.00	100.00
Subtotal	2	2	0	1	1	0	100.00	100.00
Total	2	2	0	1	1	0		100.00

RESUMEN DE LA FLORA VASCULAR DE ISLAS DESVENTURADAS

	NF	NG	GE	NT	NS	NI	EN	NA	AD	%F
DICOT	12	21	4	31	30	1	19	2	10	99.93
MONOC	1	1	0	2	2	0	1	1	0	6.06
Total	13	22	4	33	32	1	20	3	10	100.00

PORCENTAJES DE ENDEMICAS, NATIVAS Y ADVENTICIAS

	En la flora total			En la división o clase		
	EN	NA	AD	EN	NA	AD
DICOT	57.60	6.06	30.30	61.29	6.45	32.26
MONOC	3.03	3.03	0.00	50.00	50.00	0.00
Total	60.63	9.09	30.30			

GENEROS ENDEMICOS: DICOTYLEDONEAE

BORAGINACEAE: *Nesocaryum*.
CARYOPHYLLACEAE: *Sanctambrosia*.
COMPOSITAE: *Lycapsus*, *Thamnoseris*.

ESTADISTICA DE LA FLORA VASCULAR DE ISLA DE PASCUA: FAMILIAS

PTERIDOPHYTA

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
ASPLEN	1	0	2	2	0	1	1	0	12.50	1.71
BLECHN	1	0	1	1	0	1	0	0	6.25	0.85
DAVALL	1	0	1	1	0	0	1	0	6.25	0.85
DENNST	1	0	1	1	0	0	1	0	6.25	0.85
DRYOPT	4	0	4	4	0	3	1	0	25.00	3.42
OPHIOG	1	0	2	2	0	0	2	0	12.50	1.71
POLYPO	1	0	1	1	0	0	1	0	6.25	0.85
PSILOT	1	0	1	1	0	0	1	0	6.25	0.85
THELYP	1	0	2	2	0	0	2	0	12.50	1.71
VITTAR	1	0	1	1	0	0	1	0	6.25	0.85
Total	13	0	16	16	0	5	11	0	100.00	13.65

DICOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
AIZOAC	2	0	2	2	0	0	0	2	2.94	1.71
CAESAL	1	0	1	1	0	0	0	1	1.47	0.85
CARYOP	2	0	2	2	0	0	0	2	2.94	1.71
CHENOP	1	0	1	1	0	0	0	1	1.47	0.85
COMPOS	10	0	11	11	0	0	0	11	16.18	9.40
CONVOL	3	0	3	3	0	0	1	2	4.41	2.56
CRUCIF	3	0	3	3	0	0	0	3	4.41	2.56
EUPHOR	2	0	4	4	0	0	0	4	5.88	3.42
GENTIA	1	0	1	1	0	0	0	1	1.47	0.85
LABIAT	2	0	2	2	0	0	0	2	2.94	1.71
MALVAC	4	0	4	4	0	0	0	4	5.88	3.42
MELIAC	1	0	1	1	0	0	0	1	1.47	0.85
MIMOSA	2	0	2	2	0	0	0	2	2.94	1.71
MORACE	1	0	1	1	0	0	0	1	1.47	0.85
MYRTAC	1	0	1	1	0	0	0	1	1.47	0.85
NYCTAG	1	0	1	1	0	0	0	1	1.47	0.85
ONAGRA	1	0	2	2	0	0	0	2	2.94	1.71
OXALID	1	0	2	2	0	0	0	2	2.94	1.71
PAPILI	6	0	6	6	0	1	0	5	8.82	5.13
PLANTA	1	0	2	2	0	0	0	2	2.94	1.71
POLYGO	2	0	2	2	0	0	0	2	2.94	1.71
PORTUL	1	0	1	1	0	0	0	1	1.47	0.85
PRIMUL	1	0	1	1	0	0	1	0	1.47	0.85
SAPIND	1	0	1	1	0	0	0	1	1.47	0.85
SCROPH	1	0	1	1	0	0	0	1	1.47	0.85
SOLANA	4	0	4	4	0	0	2	2	5.88	3.42
TILIAC	1	0	1	1	0	0	0	1	1.47	0.85
TROPAE	1	0	1	1	0	0	0	1	1.47	0.85
UMBELL	1	0	2	2	0	0	1	1	2.94	1.71
VERBEN	1	0	1	1	0	0	0	1	1.47	0.85
VITACE	1	0	1	1	0	0	0	1	1.47	0.85
Total	61	0	68	68	0	1	5	62	100.00	58.05

MONOCOTYLEDONEAE

FAM	NG	GE	NT	NS	NI	EN	NA	AD	%D	%F
COMMEL	1	0	1	1	0	0	0	1	3.03	0.85
CYPERA	2	0	5	5	0	0	1	4	15.15	4.27
GRAMIN	21	0	24	24	0	3	2	19	72.73	20.51
IRIDAC	1	0	1	1	0	0	0	1	3.03	0.85
JUNCAC	1	0	1	1	0	0	1	0	3.03	0.85
LILIAC	1	0	1	1	0	0	0	1	3.03	0.85
Total	27	0	33	33	0	3	4	26	100.00	28.18

ESTADISTICA DE LA FLORA DE ISLA DE PASCUA

PTERIDOPHYTA: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
ASPLENIACEAE								
Asplenium	2	2	0	1	1	0	100.00	12.50
Subtotal	2	2	0	1	1	0	100.00	12.50
BLECHNACEAE								
Doodia	1	1	0	1	0	0	100.00	6.25
Subtotal	1	1	0	1	0	0	100.00	6.25
DAVALLIACEAE								
Davallia	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25
DENNSTAEDTIACEAE								
Microlepia	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25

	NT	NS	NI	EN	NA	AD	%F	%D
DRYOPTERIDACEAE								
Diplazium	1	1	0	1	0	0	25.00	6.25
Dryopteris	1	1	0	0	1	0	25.00	6.25
Elaphoglossum	1	1	0	1	0	0	25.00	6.25
Polystichum	1	1	0	1	0	0	25.00	6.25
Subtotal	4	4	0	3	1	0	100.00	25.00
OPHIOGLOSSACEAE								
Ophioglossum	2	2	0	0	2	0	100.00	12.50
Subtotal	2	2	0	0	2	0	100.00	12.50
POLYPODIACEAE								
Microsorum	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25
PSILOTACEAE								
Psilotum	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25
THELYPTERIDACEAE								
Thelypteris	2	2	0	0	2	0	100.00	12.50
Subtotal	2	2	0	0	2	0	100.00	12.50
VITTARIACEAE								
Vittaria	1	1	0	0	1	0	100.00	6.25
Subtotal	1	1	0	0	1	0	100.00	6.25
Total	16	16	0	5	11	0		100.00

DICOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
AIZOACEAE								
Sesuvium	1	1	0	0	0	1	50.00	1.47
Tetragonia	1	1	0	0	0	1	50.00	1.47
Subtotal	2	2	0	0	0	2	100.00	2.94
CAESALPINIACEAE								
Caesalpinia	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
CARYOPHYLLACEAE								
Cerastium	1	1	0	0	0	1	50.00	1.47
Polycarpon	1	1	0	0	0	1	50.00	1.47
Subtotal	2	2	0	0	0	2	100.00	2.94
CHENOPODIACEAE								
Chenopodium	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
COMPOSITAE								
Ageratum	1	1	0	0	0	1	9.09	1.47
Bidens	1	1	0	0	0	1	9.09	1.47
Cichorium	1	1	0	0	0	1	9.09	1.47
Cirsium	1	1	0	0	0	1	9.09	1.47
Conyza	1	1	0	0	0	1	9.09	1.47
Galinsoga	1	1	0	0	0	1	9.09	1.47
Gamochaeta	1	1	0	0	0	1	9.09	1.47
Hypochaeris	1	1	0	0	0	1	9.09	1.47
Sonchus	2	2	0	0	0	2	18.18	2.94
Taraxacum	1	1	0	0	0	1	9.09	1.47
Subtotal	11	11	0	0	0	11	100.00	16.17
CONVOLVULACEAE								
Calystegia	1	1	0	0	0	1	33.33	1.47
Convolvulus	1	1	0	0	0	1	33.33	1.47
Ipomoea	1	1	0	0	1	0	33.33	1.47
Subtotal	3	3	0	0	1	2	100.00	4.41
CRUCIFERAE								
Coronopus	1	1	0	0	0	1	33.33	1.47
Lepidium	1	1	0	0	0	1	33.33	1.47
Nasturtium	1	1	0	0	0	1	33.33	1.47
Subtotal	3	3	0	0	0	3	100.00	4.41
EUPHORBIACEAE								
Euphorbia	3	3	0	0	0	3	75.00	4.41
Ricinus	1	1	0	0	0	1	25.00	1.47
Subtotal	4	4	0	0	0	4	100.00	5.88
GENTIANACEAE								
Centaurium	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
LABIATAE								
Marrubium	1	1	0	0	0	1	50.00	1.47
Stachys	1	1	0	0	0	1	50.00	1.47
Subtotal	2	2	0	0	0	2	100.00	2.94
MALVACEAE								
Malva	1	1	0	0	0	1	25.00	1.47
Malvastrum	1	1	0	0	0	1	25.00	1.47
Sida	1	1	0	0	0	1	25.00	1.47
Thespesia	1	1	0	0	0	1	25.00	1.47
Subtotal	4	4	0	0	0	4	100.00	5.88
MELIACEAE								
Melia	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
MIMOSACEAE								
Acacia	1	1	0	0	0	1	50.00	1.47
Leucaena	1	1	0	0	0	1	50.00	1.47
Subtotal	2	2	0	0	0	2	100.00	2.94
MORACEAE								
Broussonetia	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47

	NT	NS	NI	EN	NA	AD	%F	%D
MYRTACEAE								
Psidium	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
NYCTAGINACEAE								
Boerhavia	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
ONAGRACEAE								
Oenothera	2	2	0	0	0	2	100.00	2.94
Subtotal	2	2	0	0	0	2	100.00	2.94
OXALIDACEAE								
Oxalis	2	2	0	0	0	2	100.00	2.94
Subtotal	2	2	0	0	0	2	100.00	2.94
PAPILIONACEAE								
Crotalaria	1	1	0	0	0	1	16.67	1.47
Lupinus	1	1	0	0	0	1	16.67	1.47
Medicago	1	1	0	0	0	1	16.67	1.47
Phaseolus	1	1	0	0	0	1	16.67	1.47
Sophora	1	1	0	1	0	0	16.67	1.47
Trifolium	1	1	0	0	0	1	16.67	1.47
Subtotal	6	6	0	1	0	5	100.00	8.82
PLANTAGINACEAE								
Plantago	2	2	0	0	0	2	100.00	2.94
Subtotal	2	2	0	0	0	2	100.00	2.94
POLYGONACEAE								
Polygonum	1	1	0	0	0	1	50.00	1.47
Rumex	1	1	0	0	0	1	50.00	1.47
Subtotal	2	2	0	0	0	2	100.00	2.94
PORTULACACEAE								
Portulaca	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
PRIMULACEAE								
Samolus	1	1	0	0	1	0	100.00	1.47
Subtotal	1	1	0	0	1	0	100.00	1.47
SAPINDACEAE								
Sapindus	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
SCROPHULARIACEAE								
Verbascum	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
SOLANACEAE								
Lycium	1	1	0	0	1	0	25.00	1.47
Nicotiana	1	1	0	0	0	1	25.00	1.47
Physalis	1	1	0	0	0	1	25.00	1.47
Solanum	1	1	0	0	1	0	25.00	1.47
Subtotal	4	4	0	0	2	2	100.00	5.88
TILIACEAE								
Triumfetta	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
TROPAEOLACEAE								
Tropaeolum	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
UMBELLIFERAE								
Apium	2	2	0	0	1	1	100.00	2.94
Subtotal	2	2	0	0	1	1	100.00	2.94
VERBENACEAE								
Verbena	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
VITACEAE								
Vitis	1	1	0	0	0	1	100.00	1.47
Subtotal	1	1	0	0	0	1	100.00	1.47
Total	68	68	0	1	5	62		100.00

MONOCOTYLEDONEAE: FAMILIAS, GENEROS Y ESPECIES

	NT	NS	NI	EN	NA	AD	%F	%D
COMMELINACEAE								
Commelina	1	1	0	0	0	1	100.00	3.03
Subtotal	1	1	0	0	0	1	100.00	3.03
CYPERACEAE								
Cyperus	4	4	0	0	0	4	80.00	12.12
Scirpus	1	1	0	0	1	0	20.00	3.03
Subtotal	5	5	0	0	1	4	100.00	15.15
GRAMINEAE								
Axonopus	1	1	0	1	0	0	4.17	3.03
Bothriochloa	1	1	0	0	0	1	4.17	3.03
Briza	1	1	0	0	0	1	4.17	3.03
Bromus	1	1	0	0	0	1	4.17	3.03
Cenchrus	1	1	0	0	0	1	4.17	3.03
Chloris	1	1	0	0	0	1	4.17	3.03
Cynodon	1	1	0	0	0	1	4.17	3.03
Dichelachne	1	1	0	0	0	1	4.17	3.03
Digitaria	2	2	0	0	0	2	8.33	6.06
Eleusine	1	1	0	0	0	1	4.17	3.03
Eragrostis	1	1	0	0	0	1	4.17	3.03
Hordeum	1	1	0	0	0	1	4.17	3.03
Lachnagrostis	1	1	0	0	1	0	4.17	3.03
Melinis	1	1	0	0	0	1	4.17	3.03
Microlaena	1	1	0	0	0	1	4.17	3.03
Paspalum	3	3	0	0	1	2	12.50	9.09

	NT	NS	NI	EN	NA	AD	%F	%D
Rytidosperma	1	1	0	1	0	0	4.17	3.03
Sorghum	1	1	0	0	0	1	4.17	3.03
Sporobolus	1	1	0	0	0	1	4.17	3.03
Stipa	1	1	0	1	0	0	4.17	3.03
Vulpia	1	1	0	0	0	1	4.17	3.03
Subtotal	24	24	0	3	2	19	100.00	72.72
IRIDACEAE								
Sisyrinchium	1	1	0	0	0	1	100.00	3.03
Subtotal	1	1	0	0	0	1	100.00	3.03
JUNCACEAE								
Juncus	1	1	0	0	1	0	100.00	3.03
Subtotal	1	1	0	0	1	0	100.00	3.03
LILIACEAE								
Cordyline	1	1	0	0	0	1	100.00	3.03
Subtotal	1	1	0	0	0	1	100.00	3.03
Total	33	33	0	3	4	26		100.00

RESUMEN DE LA FLORA VASCULAR DE ISLA DE PASCUA

	NF	NG	GE	NT	NS	NI	EN	NA	AD	%D
PTERI	10	13	0	16	16	0	5	11	0	13.65
DICOT	31	61	0	68	68	0	1	5	62	58.05
MONOC	6	27	0	33	33	0	3	4	26	28.18
Total	47	101	0	117	117	0	9	20	88	100.00

PORCENTAJES DE ENDEMICAS, NATIVAS Y ADVENTICIAS

	En la flora total			En la división o clase		
	EN	NA	AD	EN	NA	AD
PTERI	4.27	9.40	0.00	[illegible]	68.75	0.00
DICOT	0.85	4.27	55.99	[illegible]	7.35	91.18
MONOC	2.56	3.42	22.22	[illegible]	12.12	78.78
Total	7.68	17.09	75.21			

Las familias con NT mayor de 5 en Isla de Pascua son:

FAM	NT	% en la flora
GRAMINEAE	24	20.51
COMPOSITAE	11	9.40
PAPILIONACEAE	6	5.13

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NUEVOS GENEROS PARA LA FLORA ADVENA DE CHILE

NEW GENERA FOR THE ADVENTITIOUS FLORA OF CHILE

Oscar Matthei y Max Quezada*

RESUMEN

Se señalan a *Galeopsis* (Labiatae) con la especie *Galeopsis tetrahit* L. y *Brachypodium* (Poaceae) con la especie *Brachypodium distachyon* (L.) P. Beauv., como nuevos géneros para la flora advena de Chile. Además de las descripciones se indica su distribución, material estudiado y se incluyen dibujos originales.

ABSTRACT

Two new genera are described for the adventitious flora of Chile. The genus *Galeopsis* (Labiatae) with the species *Galeopsis tetrahit* L. and the genus *Brachypodium* with the species *Brachypodium distachyon* (L.) P. Beauv. are recognized as new additions to the non native flora of Chile and described. Their distribution as well as original illustrations are appended.

KEYWORDS: Chile, adventive flora, *Brachypodium*, *Galeopsis*.

INTRODUCCION

Las colecciones que existen en el país sobre la flora introducida están poco actualizadas, debido principalmente a que tanto botánicos chilenos como extranjeros están más que nada dedicados a recolectar la flora nativa. Hasta el momento, las colecciones existentes de los lugares intervenidos no son abundantes y no existen colecciones exhaustivas realizadas en terrenos cultivados, orillas de caminos o calles de ciudades. El Departamento de Botánica ha iniciado un estudio con el fin de tener un inventario actualizado de toda la flora advena presente en el país, especialmente de aquella que interviene en los cultivos.

MATERIALES Y METODOS

Se estudió el material del herbario de la Universidad de Concepción (CONC); además se realizaron intensas colectas en la VI y X regiones, lo cual dio como resultado que se encontraran dos géneros que no habían sido señalados como integrantes de la flora de Chile. Esta aseveración se basa en el hecho de que no figuran en la obra de Muñoz (1959), ni se encuentran citados en el Catálogo de la flora vascular de Chile (Marticorena y Quezada, 1985).

Se entrega la descripción de las especies, dibujos originales, material estudiado, distribución y observaciones relacionadas con su hábitat.

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LABIATAE

Galeopsis tetrahit L.

Linnaeus, Sp. Pl. 579. 1753.

Anual. Tallos robustos, de 10-60 cm de alto, sencillos o ramificados, angulosos, con nodos abultados, densamente cubiertos de pelos sencillos y glandulosos. Hojas opuestas, con pecíolo de 1-4 cm de largo, láminas aovadas a lanceoladas, de 3-8 cm de largo por 1.5-5 cm de ancho, base cuneiforme, margen dentado. Flores con brácteas setosas, agrupadas en verticilastros hojosos, densos, terminales o axilares; cáliz de 10-14 mm de largo, persistente, acampanado, nervado, pubescente, con cinco dientes que se prolongan en espinas tan largas como el tubo calicinal; corola de 12-15 mm de largo, bilabiada, rosada con el margen de los lóbulos blanquecinos; labio superior entero a ligero lobulado, cuculado; labio inferior 3-partido, con el lóbulo central ancho y provisto de dos protuberancias cónicas basales; estambres 4, didínamos; núculas 4, de 2-2.5 mm de largo, obovadas, con un lado convexo y el otro angular, cicatriz basal. (Lám. 1 B, C, D).

Observaciones:

Originaria de Europa. De acuerdo a Hanf (1982: 330), es una maleza que se encuentra en trigo y cultivos escardados (papas, remolachas, hortalizas). También está presente en Estados Unidos y Canadá (Muenscher 1955: 369). En nuestro país se ha encontrado hasta el momento en las provincias de Osorno y Llanquihue, X Región.

Es una maleza que presenta gran agresividad, debido a que sus abundantes semillas germinan constantemente durante un largo período, de tal modo que en el cultivo se encuentran desde pequeñas plántulas hasta ejemplares en plena fructificación, todo lo cual dificulta su control.

Material estudiado

X Región: Provincia de Osorno. Chuyaca. 45 m. (40° 35'S-73° 05'W). 24-XII-1944. RUDOLPH 5433 (VALD); Cañal Bajo, estación Genética. 80 m. (40° 36'S-73° 06'W). 1943 WUNDER s.n. (VALD). Provincia de Llanquihue. El Mirador, entre Alerce y Puerto Varas. 130 m. (41° 20'S-72° 57'W). 18-III-1990. MATTHEI y QUEZADA 973 (CONC).

POACEAE

Brachypodium distachyon (L.) P. Beauv.
Palisot de Beauvois, Agrost. 101, 155. 1812.

Anual. Cañas floríferas de 10-25 cm de alto, geniculadas; nodos 1-2, pubescentes. Láminas de 1-3 cm de largo y 3-4 mm de ancho, con pelos esparcidos; lígula de 1-1.5 mm de largo, pestañosa en el ápice; vainas glabras, abiertas. Inflorescencia formada por 2-3 espiguillas sésiles, 3-16 floras, de 3-3.5 cm de largo, aplanadas dorsalmente; glumas menores que la lema contigua, la inferior de 5-6 mm de largo, 7-nervada, la superior de 7-8 mm de largo, 7-nervada; lema de 7-9 mm de largo, con siete venas prominentes, dorso redondeado; arista de 4-10 mm de largo; pálea igualando a la lema, con las carenas pestañosas. Cariopsis de 6-7 mm de largo, con hilo lineal tan largo como el fruto (Lám. 1 A).

Observaciones:

Originaria del sur de Europa. De acuerdo a Bor (1968: 170), se comporta como maleza en terrenos regados de Irak. También está presente en Argentina y Uruguay, donde, según Nicora y Rúgolo de Agrasar (1987: 322), pertenece a la flora adventicia. Hasta el momento sólo se encuentra en la VI Región, donde crece abundantemente a orillas de camino.

Material estudiado

VI Región. Provincia Cardenal Caro, 7 km antes de Pichilemu, desde Alcones. 120 m (34°22'S-71°57'W). 30-XI-1989. MATTHEI y QUEZADA 800 (CONC).

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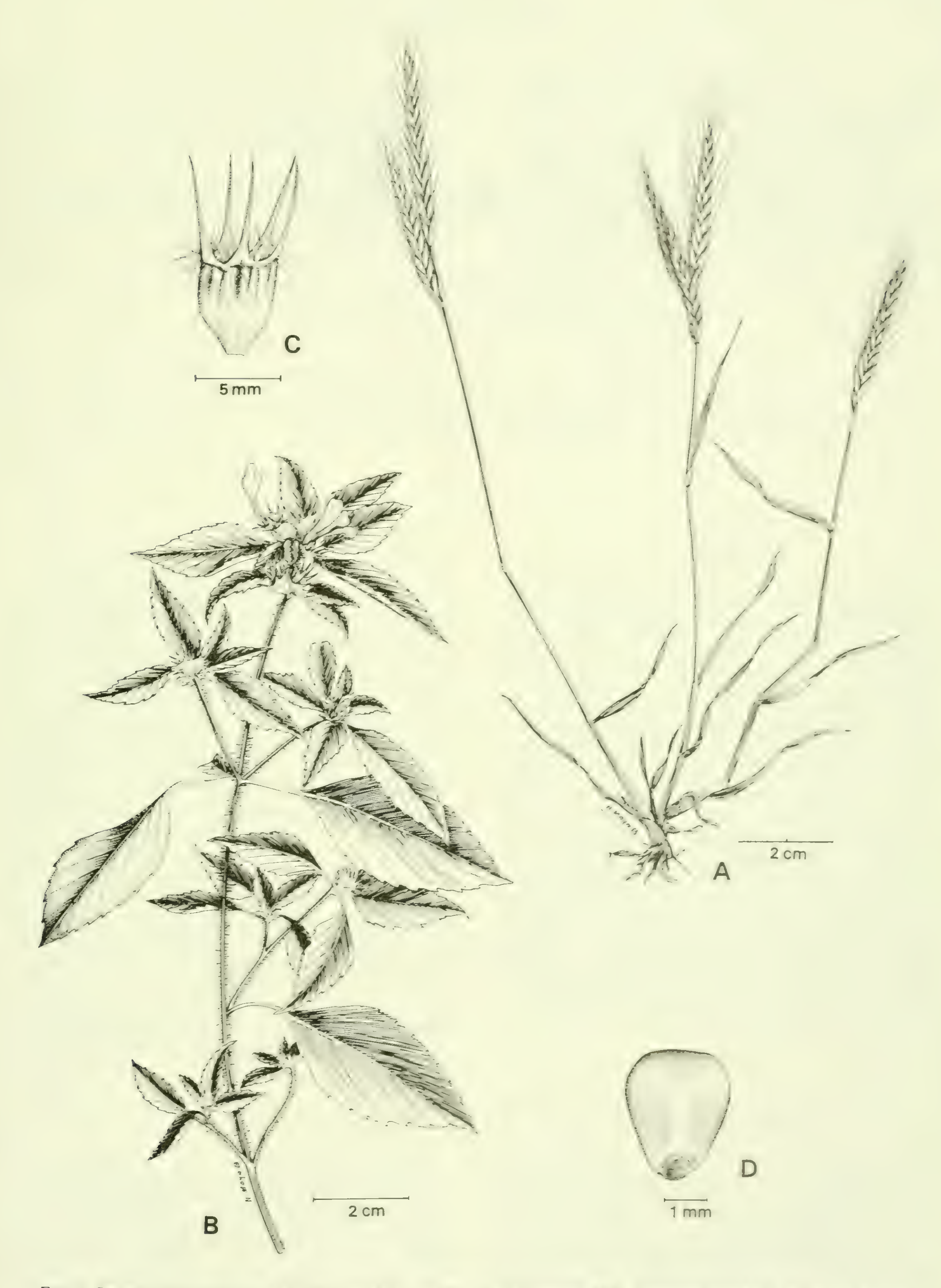


FIG. 1. *Brachypodium distachyon* (L.) Beauv. A: planta (Matthei y Quezada [illegible]). *Galeopsis tetrahit* L. B: planta. C: caliz. D: núcula (Matthei y Quezada 973).

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A CHECKLIST OF THE NATIVE ANNUAL FLORA OF CONTINENTAL CHILE

UN CATALOGO DE LA FLORA ANUAL NATIVA DE CHILE CONTINENTAL

Mary T. Kalin Arroyo*, Clodomiro Marticorena** and Melica Muñoz***

ABSTRACT

A checklist of the native annual species of continental Chile is provided. Observations on 4408 native species (over 99% of the total native vascular flora of continental Chile) indicate the presence of the annual habit in 692 species (15.7% of the flora). Annuals occurs in 196 genera (24.7%) and 53 families (31.2%). There are proportionately more annuals among dicotyledons (19.3%) than among monocotyledons (4.3%), a trend also seen to be statistically significant at the generic level. 358 (51.7%) annual species are fairly certainly endemic to continental Chile, while an additional 18 species (2.6%) are characterized by endemic Chilean infraspecific taxa. A further 20 species are probably endemic to continental Chile as are varieties of 3 species. Seven of Chile's endemic genera (10.4%) are exclusively annual (*Cyphocarpus* (Campanulaceae); *Microphyes* (Caryophyllaceae); *Moscharia* (Asteraceae); *Agallis* (Cruciferae); *Scyphanthus* (Loasaceae); *Homalocarpus* (Umbelliferae); *Araeoandra* (Vivianaceae)). The frequency of the annual habit in Chile is briefly compared with that of other arid and semi-arid regions.

KEYWORDS: Annual habit; flora of continental Chile; endemic species and genera; mediterranean-type climate.

RESUMEN

Se presenta un catálogo de las especies anuales de la flora nativa de Chile continental. Observaciones en 4408 especies (más del 99% de la flora vascular nativa total de Chile continental) indica la presencia del hábito anual en 692 especies (15,7% de la flora). Las anuales pertenecen a 196 géneros (24,7%) y 53 familias (31,2%). La frecuencia del hábito anual es significativamente mayor en las dicotiledóneas (19,3%) que en las monocotiledóneas (4,3%), una tendencia que también es estadísticamente significativa al nivel de género. 358 (51,7%) de las especies anuales son endémicas a Chile continental, en tanto que 18 (2,6%) especies presentan variedades chilenas endémicas. 20 especies adicionales probablemente son endémicas tal como lo son variedades de 3 especies adicionales. Siete de los géneros endémicos de Chile continental (10,4% del total) son exclusivamente anuales (*Cyphocarpus* (Campanulaceae); *Microphyes* (Caryophyllaceae); *Moscharia* (Asteraceae); *Agallis* (Cruciferae); *Scyphanthus* (Loasaceae); *Homalocarpus* (Umbelliferae); *Araeoandra* (Vivianaceae)). Se compara la frecuencia del hábito anual en la flora nativa de Chile continental con la de otras áreas áridas y semi-áridas.

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INTRODUCTION

A significant proportion of continental Chile is characterized by arid to semi-arid climates with strongly seasonal or highly irregular rainfall (di Castri & Hajek, 1976). Desert to semi-desert climates extend along the coast and far inland to above 2000 m from the far north (17°S) to

around 26°S (Arroyo et al., 1988). In central Chile from 32° - 38°S and in interior valleys as far south as 40°S the climate is typically mediterranean (di Castri, 1988). A semi-mediterranean-type climate appears in the extreme eastern border of the Chilean Patagonia (di Castri & Hajek, 1976).

Many temperate semi-arid and arid regions are known to support taxonomically diverse and speciose native annual assemblages. The State of California, with a predominantly mediterranean-type climate, supports 28.6% native annuals (Raven & Axelrod, 1978) while the Sonoran desert is characterized by 21.4% (Shreve & Wiggins, 1964). The flora of Israel, with only 1.7% aliens across all life-forms, supports more than 50% annuals (Eig, 1931, 1932; Danin & Orshan, 1990). A notable exception to this rule, is the mediterranean-type climate Cape region of South Africa with only 6.4% native annuals (Goldblatt, 1978). Vegetation studies also suggest a relatively low percentage of annuals for mediterranean-type climate areas in southern Australia (Adamson, 1927). Interestingly, both mediterranean-type climate areas with lower percentages of annuals are found in the southern hemisphere.

Chile, mainly as a result of a lack of a comprehensive floristic treatment for the country, is one of the last mediterranean-type climate regions to be surveyed for the annual habit. Some data has been forthcoming from vegetation plots, small scale floristic studies and other ecological studies (e.g. Schlegel, 1966; Mooney et al., 1977; Arroyo & Squeo, 1990; Arroyo & Uslar, 1990). Additional information for a few areas may be gleaned from regional floras (e.g. Moore, 1982; Arroyo et. al., 1984; Arroyo et. al., 1988; Arroyo et. al., 1989). However the present state of knowledge of the frequency of the annual habit is insufficient for characterizing the Chilean flora in general.

Here we provide a complete checklist of the native annual species of continental Chile. The information has been gathered in relation to a more comprehensive study of similarities and differences between the vascular floras of Chile and California, to be presented elsewhere. Given the lack of a modern flora, publication of a checklist of the native annuals of Chile seems timely. Such information should be useful to professional plant ecologists who are presently forced to work with limited botanical literature. Secondly, agronomists interested in native forage crops should benefit from the availability of such a checklist. The checklist has been compiled to a large degree from literature sources. In that some authors give more attention to life-form than others, further observations by field biologists using it constitute the best avenue for its perfection.

Information Sources

To assess the incidence of the annual habit in continental Chile a data base of all native vascular plant species occurring there was developed. By continental Chile we mean *mainland Chile excluding the Juan Fernández Islands, the San Ambrosio and San Felix Islands and Easter Island*, all under Chilean jurisdiction. The data base relied on the checklist of the Chilean flora published by Marticorena & Quezada (1985), as baseline information, modified as follows. Species in the Marticorena & Quezada (1985) checklist restricted to the forementioned island territories of Chile and all introduced species in the list were excluded. The reduced list was further emended for new species, numerous synonymy changes published after 1985 and corrections of the alien status of some species. Infraspecific taxa are not considered. The final data base contained 4443 native vascular plants species distributed in 793 genera and 170 families.

For assessing the annual habit the relevant life-form information for many species was obtained directly from recent generic revisions. For others we found it necessary to rely on the older Reiche (1896-1911) flora, local floras for Argentina and Chile (e.g. Moore, 1982; Correa, 1971) and original species descriptions. Such information was complemented with our own field knowledge of life-forms and consultation of herbarium material.

Fairly reliable information was found for a total of 4408 (>99% of the 4443) names in the continental checklist. For the present purposes, 20 species, given as "probably annual" are given the benefit of the doubt. Species varying in habit from an annual to biennial or perennial herb are designated as facultatively annual. Annual spe-

cies and genera with annuals endemic to continental Chile are indicated.

Checklist of the Native Annuals of Continental Chile

(fa) following the specific epithet indicates a *facultative annual. Probable annuals* are followed by (a?). All other species are considered *obligate annuals.* Annual species *endemic* to continental Chile are indicated by (e). Annual species which contain an *endemic variety* in Chile are indicated by (ev). Genera endemic to Chile with annuals are designated by (E). The questioned endemics (?) are unsure endemics. (nv) following a specific epithet indicates a species occurring in Chile represented by a native variety in addition to an alien variety.

PTERIDOPHYTA

SALVINIACEAE

Azolla
filiculoides Lam.

ANGIOSPERMAE: DICOTYLEDONEAE

AIZOACEAE

Tetragonia
copiapina Phil. (e)
espinosae Muñoz (e)
macrocarpa Phil. (ev)
pedunculata Phil.
tenella Johnst. (e)
trigona Phil. (fa)(e)

AMARANTHACEAE

Amaranthus
asplundii Thell.
looseri Suess. (e)

Gomphrena
umbellata Remy

ASTERACEAE

Agoseris
chilensis (Less.) Greene (e)
coronopifolia (D'Urv.) Chamb. ex D.M. Moore (fa)

Amblyopappus
pusillus H. et A.

Bidens
andicola Kunth. (fa)

Blennosperma
chilense Less. (e)

Chaetanthera
aymarae Martic. et Quez. (e)
ciliata R. et P. (e)
euphrasioides (DC.) Meigen
flabellata D. Don (e)
flabellifolia Cabr. (e)
glabrata (DC.) Meigen (e)
gnaphalioides (Remy) Johnst.
incana Poepp. ex Less. (e)
leptocephala Cabr. (e)
limbata (D. Don) Less. (e)
linearis Poepp. ex Less. (e)
microphylla (Cass.) H. et A. (ev)
minuta (Phil.) Cabr.
moenchioides Less. (e)
planiseta Cabr. (e)
pusilla (D. Don) H. et A.
splendens (Remy) B.L. Rob.
tenella Less. (e)

Conyza
artemisiifolia Meyen et Walp.
bustillosiana Remy (e)
copiapina Phil. (a?)(e)
floribunda H.B.K. (fa)
glabrata Phil. (fa)(e)
hirtella (DC.) Martic. (e)*
lechleri (Sch. Bip.) Cabr.
minutiflora Phil. (e)

* *Conyza hirtella* (De Candolle) Marticorena, nov. comb. Basiónimo: *Erigeron hirtellus* De Candolle, Prodr. 5: 290. 1836.

Cotula
mexicana DC.

Doniophyton
anomalum (D. Don) Kurtz
patagonicum (Phil.) Hieron.

Eclipta
prostrata (L.) L. (fa)

Erechtites
leptantha (Phil.) Cabr. (e)

Facelis
plumosa (Wedd.) Sch. Bip.
retusa (Lam.) Sch. Bip. (ev)

Flaveria
bidentis (L.) O.K.

Galinsoga
parviflora Cav.
quadriradiata R. et P.

Gamochaeta
monticola (Phil. ex Reiche) Cabr.
simplicicaulis (Willd. ex Sprengel) Cabr.
sphacelata (H.B.K.) Cabr.
stachydifolia (Lam.) Cabr.

Gnaphalium
aldunateoides Remy
cheiranthifolium Lam. (fa)
cymatoides Kunze ex DC. (ev)
diminutivum Phil. (e?)
heterotrichum Phil. (e)
moelleri Phil.
perpusillum Phil. (e?)
phaeolepis Phil. (e)
pratense Phil.
ramosum Phil. (e)

Helenium
aromaticum (Hook.) Bailey (fa)(e)
atacamense Cabr. (fa)(e)
ovallense Bierner (fa)(e)
urmenetae (Phil.) Cabr. (fa)(e)
vallenariense (Phil.) Bierner (fa)(e)

Heterosperma
nanum (Nutt.) Sherff
ovatifolium Cav.

Hieracium
antarcticum D'Urv.

Lasthenia
kunthii (Less.) H. et A. (e)

Leucheria
cerberoana Remy (e)
cumingii H. et A. (e)
glabriuscula (Phil.) Reiche (e)
glandulosa D. Don (e)
menana Remy (e)
oligocephala Remy (e)
senecioides H. et. A. (e)
tenuis Less. (e)

Madia
chilensis (Nutt.) Reiche (e)
sativa Mol.

Malacothrix
chevelandii A. Gray
coulteri A. Gray

Micropsis
nana D.C.

Microseris
pygmaea D. Don

Moscharia (E)
pinnatifida R. et P. (e)
solbrigii Crisci (e)

Polyachyrus
annuus Johnst.

Psilocarphus
brevissimus Nutt.

Schkuhria
multiflora H. et A.
pinnata (Lam.) O.K.

Senecio
troncosii Phil. (e)

Sigesbeckia
jorullensis H.B.K.

Soliva
pterosperma (A.L. Juss.) Less.
sessilis R. et P. (e)
stolonifera (Brot.) Loud.
valdiviana Phil.

Tagetes
biflora Cabr.
minuta L.
multiflora H.B.K.

Triptilion
achilleae DC. (fa)
berteroi Phil. (a?)(e)
capillatum (D. Don) DC. (e)
cordifolium Lag. ex Lindl. (e)
diffusum (D. Don) DC. (a?)(e)
digitatum Phil. (e)
dusenii O. Hoffm. (e)
euphrasioides Bert, ex DC. (e)
gibbosum Remy (e)

Verbesina
encelioides (Cav.) B. et H. ex A. Gray (fa)

Villanova
oppositifolia Lag.

Xanthium
argenteum Widder (e)

BORAGINACEAE

Amsinckia
calycina (Moris) Chater
tessellata A. Gray

Cryptantha
alfalfalis (Phil.) Johnst. (e)
aspera (Phil.) Grau (e)
calycina (Phil.) Reiche (e)
calycotricha Johnst. (e)
chaetocalyx (Phil.) Johnst. (e)
chispae Grau (e)
clandestina (Trev.) Johnst. (e)
cynoglossoides (Phil.) Johnst.
dichita (phil.) Johnst. (e)
diffussa (Phil.) Johnst.
dimorpha (Phil.) Greene (e)
diplotricha (Phil.) Reiche
dolichophylla (Phil.) Reiche (e)
filaginea (Phil.) Reiche
filiformis (Phil.) Reiche (e)
gayi Johnst. (fa)(e)
globulifera (Clos) Reiche
glomerata Lehm. (e)
haplostachya (Phil.) Johnst. (e)
hispida (Phil.) Reiche (e)
involucrata (Phil.) Reiche (fa)(e)
kingii (Phil.) Reiche (e)
marticorenae Grau (e)
parviflora (Phil.) Reiche
phaceloides (Clos) Reiche (e)
romanii Johnst. (e)
taltalensis Johnst. (e)
volckmannii (Phil.) Johnst. (e)
werdermanniana Johnst. (e)

Heliotropium
geissei F. Phil. (e)
microstachyum R. et P.
paronychioides A.DC.

Myosotis
antarctica Hook, f. (fa)

Pectocarya
anomala Johnst.
dimorpha (Johnst.) Johnst.
linearis (R. et P.) DC.
pusilla (A.DC) A. Gray

Plagiobothrys
armeriifolius (Phil.) Johnst. (e)
calandrinoides (Phil.) Johnst.
collinus (Phil.) Johnst. (e)
corymbosus (R. et P.) Johnst. (e)
fulvus (H. et A.) Johnst. (e)
gracilis (R. et P.) Johnst. (e?)
myosotoides (Lehm.) Brand
oppositifolius (Phil.) Johnst. (e)
polycaulis (Phil.) Johnst. (fa)(e)
pratensis (Phil.) Johnst. (e)
procumbens (Colla) A. Gray
pulchellus (Phil.) Johnst. (e)
uliginosus (Phil.) Johnst. (e)
verrucosus (Phil.) Johnst.

CALLITRICHACEAE

Callitriche
antarctica Engelm, ex Hegelm.
hermafroditica L.
lechleri (Hegelm.) Fassett
palustris L.
terrestris Rafin.

CALYCERACEAE

Boopis
gracilis Phil.
pusilla Phil. (e)

Calycera
eryngioides Remy
integrifolia (Phil.) Reiche (e)
leucanthema (Poepp.) Reiche (e?)
sessiliflora Phil. (e)

Moschopsis
monocephala (Phil.) Reiche (fa)

CAMPANULACEAE

Cyphocarpus (E)
innocuus Sandw. (e)
psammophilus Ricardi (e)
rigescens Miers (e)

Downingia
pusilla (Poepp. ex Cham.) Torr.

Legenere
valdiviana (Phil.) Wimmer (fa)

Lobelia
alata Labill.

Triodanis
biflora (R. et P.) Greene

CAPPARACEAE

Cleome
chilensis DC. (ev?)

CARYOPHYLLACEAE

Arenaria
oligosperma Naud. (a?)(e?)

Drymaria
cordata (L.) Willd. ex Roem. et Schult.
engleriana (Muschl.) Baehni et MacBr.
paposana Phil. (ev)

Microphyes (E)
litoralis Phil. (e)
minimus (Bertero ex Colla) (Briq.) (e)
robustus Ricardi (e)

Minuartia
acutiflora (Fenzl) Mattf.

Sagina
apetala Ard. (ev?)
chilensis Naud.

Spergularia
cremnophila Johnst. (fa)(e)
denticulata Phil. (e)
platensis (Cambess) Fenzl
stenocarpa (Phil.) Johnst. (fa)

Stellaria
abortiva Naud. (e?)

CHENOPODIACEAE

Atriplex
chilensis Colla (e)
myriophylla Phil.
oreophila Phil.
peruviana Moq.
philippii R. E. Fries (e)

Chenopodium
ambrosioides L. (fa)
antarcticum (Hook. f.) Hook. f.
carnosulum Moq.
frigidum Phil.
macrospermum Hook. f.
papulosum Moq.
petiolare H.B.K.
philippianum Aellen
quinoa Willd.

Nitrophila
atacamensis (Phil.) Hieron. ex Ulbr. (fa)

Suaeda
patagonica Speg.

CRASSULACEAE

Crassula
closiana (Gay) Reiche (e)
connata (R. et P.) Berger
decumbens Thunb.
moschata G. Forster
ovallei (Phil.) Reiche (e)
peduncularis (J.E. Sm.) Meigen
solieri (Gay) Meigen
tillaea Lest.-Garl.

CRUCIFERAE

Agallis (E)
lanata (Barn.) Gilg et Muschl. ex O.E. Schultz (e)

Cardamine
chilensis (e?) DC.
nivalis Gill. ex Hook. et Arn. (e)
solisii Phil. (e?).

Coronopus
leptocarpus Boelcke (e)

Cremolobus
chilensis (Lag. ex DC.) DC.

Descurainia
cumingiana (Fisch. et Mey.) Prantl (fa)(ev)
diversifolia O.E. Schulz (e)
glaucescens (Phil.) O.E. Schulz (fa)
nuttallii (Colla) O.E. Shulz (a?)(e)
pinnata (Walter) Britton
stricta (Phil.) Prantl ex Reiche (fa)(ev)

Diplotaxis
chilensis Barn. (e)

Draba
australis R. Br.

Lepidium
aletes Macbr.
angustissimum Phil. (e)
auriculatum Regel et Koern. (fa)(e)
bipinnatifidum A.N. Desv. (fa)
brevicaule Barn. (e)
curicoanum Phil. (e)
johnstonii C. Hitch. (e)
myrianthum Phil.
nitidum Nutt. ex Torr. et Gray (e)
pseudo-didymus Thell. ex Druce (fa)
pubescens A.N. Desv.
rahmeri Phil. (fa)
raimondii O.E. Schulz
strictum (S. Wats.) Rattan.
subvaginatum Steud. ex Thell. (fa)

Menonvillea
chilensis (Turcz.) Jacks. (e)
filifolia Fischer et C. Meyer (fa)(e)
gayi Phil.
linearis DC. (fa)(e)
litoralis (Barn.) Rollins (e)
minima Rollins (e)
orbiculata Phil. (fa)(e)
pinnatifida Barn. (fa)(e)

Rorippa
austroamericana Mart.-Lab. (fa)
philippiana (Speg.) Maclosk. (fa)

Schizopetalon
arcuatum Al-Shehbaz (e)
bipinnatifidum Phil. (e)
biseriatum Phil. (e)
brachycarpum Al-Shehbaz (e)
corymbosum Al-Shehbaz (e)
dentatum (Barn.) Gilg et Muschl. (e)
maritimum Barn. (e)
rupestre (Barn.) Reiche
tenuifolium Phil. (e)
walkeri Hook. (e)

Thlaspi
alpestre (ev?)

ELATINACEAE

Elatine
triandra Schkuhr (fa)

EUPHORBIACEAE

Euphorbia
germainii Phil. (e)
meyeniana Klotzsch (fa)
minuta Phil.
pygmaea Phil. (e)
tarapacana Phil. (e)
verna Phil. (e)

GENTIANACEAE

Centaurium
cachanlahuen (Mol.) B.L. Rob.

Cicendia
quadrangularis (Lam.) Griseb.

Gentiana
lactea Phil. (e)
prostrata Haenke (fa)

Gentianella
magellanica (Gaud.) Fabris ex D.M. Moore (fa)

GERANIACEAE

Geranium
intermedium Colla, ex Savi (e)

HYDROPHYLLACEAE

Nama
dichotomum (R. et P.) Choisy
undulatum H.B.K. (ev).

Phacelia
brachyantha Benth.
cumingii (Benth.) A. Gray
nana Wedd.
pinnatifida Griseb. ex Wedd. (fa)
setigera Phil.

LABIATAE

Salvia
paposana Phil.

Stachys
eremicola Epling (e)
gilliesii Benth. (fa)
truncata Kunze ex Benth. (e)

LOASACEAE

Caiophora
contorta (Desr.) Urban et Gilg
dissecta (Hook.) Urban et Gilg (fa)(e)
tomentosula Urban et Gilg (fa)(e)

Loasa
aphanantha Urban et Gilg
artemisiifolia (Poepp.) Urban et Gilg (fa)(e)
bertrandii Phil. (e)
caespitosa Phil. (e)
chilensis (gay) Urban et Gilg (e)
floribunda H. et A. (e)
gayana Urban et Gilg (e)
intricata Gay (e)
lateritia Gill. ex Arn.
longiseta Phil. (e)
malesherbioides Phil. (e)
martinii Phil. (e)
micrantha Poepp. (e)
multifida Gay (a?)(e)
pallida Gill. ex Arn. (e)
tricolor Ker-Gawl. (ev)
triloba Domb, ex A.L. Juss. (e)
urens Jacq.
urmenetae Phil. (e)
volubilis Domb. ex A.L. Juss. (fa)(e)

Mentzelia
bartonioides (K. Presl) Urban et Gilg
pinnatifida (Phil.) Urban et Gilg
solieri (Gay) Urban et Gilg

Scyphanthus (E)
elegans D. Don (fa)(e)
stenocarpus (Poepp.) Urban et Gilg (fa)(e)

LYTHRACEAE

Pleurophora
polyandra H. et A. (e)
pusilla H. et A. (e)

MALESHERBIACEAE

Malesherbia
gabrielae Ricardi (e)
humilis Poepp. (e)
multiflora Ricardi (e)
taltalina Ricardi (e)

MALVACEAE

Cristaria
adenophora Johnst. (e)
australis Phil. (e)
cyanea Phil ex E. Baker (e)
dissecta H. et A.
divaricata Phil. ex E. Baker
diversifolia Phil. (e)
elegans Gay (a?)(e)
eriantha H. et A. (fa)(e)
flexuosa Phil. (a?)(e)
formosula Johnst.
glandulosa Phil. (e)
heterophylla (Cav.) H. et A. (e)
hirsuta K. Presl (e)
humilis Phil. (e)
inconspicua F., Phil. ex Phil. (e)
integerrima Phil. (fa)(e)
intermedia Gay (fa)(e)
intonsa Johnst. (e)
molinae Gay (e)
ovallea Gay (e)
patens Phil. (e)
pinnatifida H. et A. (e)
ranunculifolia Phil. ex E. Baker (e)
rotundifolia Phil. (e)
saniculifolia Phil. ex E. Baker (e)
sundtii Phil. (e)
trifida Phil. (e)
univittata Hochr. (e)

Lecanophora
heterophylla (Cav.) Krap. (e)

Nototriche
diminutiva (Phil.) Johnst. (e)
nana A.W. Hill
pusilla A.W. Hill
pygmaea (Remy) A.W. Hill
sarmentosa A.W. Hill

Palaua
inconspicua Johnst.
modesta (Phil.) Reiche (e)

Tarasa
antofagastana (Phil.) Krap.
congestiflora (Johnst.) Krap.
tarapacana (Phil.) Krap.
tenella (Cav.) Krap.
umbellata Krap. (e)

Urocarpidium
chilense (Braun et Bouché) Krap.
peruvianum (L.) Krap.

MOLLUGINACEAE

Glinus
radiatus (Ruiz et Pavón) Rohrb.

NOLANACEAE

Nolana
aplocaryoides (Gaud.) Johnst. (e)
baccata (Lindl.) Dunal (e)
gracillima Johnst.
intonsa I.M. Johnst. (fa)(e)
parviflora (Phil.) Phil. (e)
pterocarpa Phil. ex Wettst. (e)
rhombifolia Martic. et Quez. (e)

ONAGRACEAE

Camissonia
dentata (Cav.) Reiche (ev)

Clarkia
tenella (Cav.) Lewis et Lewis (ev)

Gayophytum
humile A.H.L. Juss.
micranthum H. et A.

Oenothera
affinis Cambess.
arequipensis Munz et Johnst.
coquimbensis Gay (e)
grisea W. Dietr. (e)

magellanica Phil. (fa)
nana Griseb. (fa)
odorata Jacq.
peruana W. Dietr. (fa)
picensis Phil.
ravenii W. Dietr. (fa)(ev)
rubida Rusby
sandiana Hassk.
villaricae W. Dietr. (fa)

OXALIDACEAE

Oxalis
aberrans Reiche (e)
clandestina Phil. (fa)(e)
compacta Gill. ex Hook. et Arn. (fa)(ev)
laxa H. et A.
leptocaulos Phil. (fa)(e)
ovalleana Phil. (e)
pubescens H.B.K.
rigida (Barn.) Lourt.
rosea Jacq. (e)
valdiviensis Barn. (fa)

PAPAVERACEAE

Argemone
hunnemannii Otto et Dietr. (fa)(e)
rosea Hook. (e)
subfusiformis Ownbey

PAPILIONACEAE

Adesmia
capitellata (Clos) Haum.
eremophila Phil. (fa)(e)
filifolia Clos (e)
micrantha Phil. (e)
multicuspis Clos (e)
muricata (Jacq.) DC.
parviflora Clos (e)
pusilla Phil. (e)
rahmeri Phil. (fa)
tenella H. et A. (e)

Astragalus
berteroanus (Moris) Reiche (e)
coquimbensis (H. et A.) Reiche (e)
dodtii Phil. (e)
paposanus Johnst. (e)
pissisii (phil.) Johnst. (e)
triflorus (DC.) A. Gray

Dalea
moquehuana Macbr.

Lathyrus
campestris Phil.
crassipes Gill. ex H. et A.

Lotus
subpinnatus Lag.

Lupinus
microcarpus Sims

Trifolium
chilense H. et A. (e)
circundatum Kunze (e)
depauperatum A.N. Desv.
macraei H. et A.
microdon H. et A.
physanthum H. et A. (e)
triaristatum Bert. et Savi
vernum Phil. (e)

Vicia
acerosa Clos
berteroana Phil. (a?)(e?)
ciliaris Phil. (a?)(e?)
graminea J.E. Sim.
inconspicua Phil. (e?)
leyboldii Phil. (fa)(e?)
magnifolia Clos (e?)
micrantha H. et A. (e?)
modesta Phil. (e?)
moorei Phil. (a?)(e?)
sessiliflora Clos (a?)(e?)
subserrata Phil. (e?)
truncata Phil. (a?)(e?)
vicina Clos (e?)

PLANTAGINACEAE

Plantago
firma Kunze et Walp.
hispidula R. et P. (e)
limensis Pers.

litorea Phil. (e)
pulvinata Speg. (fa)
rancagua Steud. (e)

POLEMONIACEAE

Collomia
biflora (R. et P.) Brand
cavanillesii H. et A. (e)

Gilia
crassifolia Benth.
glutinosa Phil.
laciniata R. et P.
valdiviensis Griseb.

Ipomopsis
gossypifera (Gill. ex Benth.) Grant

Linanthus
pusillus (Benth.) Greene (e)

Microsteris
gracilis (Dougl. ex Hook.) Greene

Navarretia
involucrata R. et P.

Polemonium
micranthum Benth

POLYGALACEAE

Polygala
gayi A. Benn. (fa)(e)

POLYGONACEAE

Chorizanthe
commisuralis Remy (e)

Lastarriaea
chilensis Remy (e)

Oxytheca
dendroidea Nutt.

PORTULACACEAE

Calandrinia
acuminata Phil. (e)
arenaria Cham. (e)
bandurriae Phil.
berteroana Phil. (e)
cachinalensis Phil. (e)
cephalophora Johnst. (e)
chrysantha Johnst. (e)
ciliata (R. et P.) DC. (a?)
compressa Schrad. ex DC. (e)
coquimbensis Barn. (e)
cumingii H. et A. (e)
cymosa Phil. (e)
demissa Phil. (e)
densiflora Barn.
erythrocoma Phil. (e)
glaucopurpurea Reiche (e)
glomerata Phil. (e)
litoralis Phil. (e)
longiscapa Barn. (e)
modesta Phil.
oblongifolia Barn. (e)
parviflora Phil. (e)
polycarpoides Phil.
ramosissima H. et A. (e)
speciosa Lehm. (e)
spicata Phil. (e)
spicigera Phil. (e)
stricta Phil. (e)
thyrsoidea Reiche (e)
trifida H. et A. (e)
villanuevae Phil. (a?)(e)

Monocosmia
monandra (R. et P.) Baillon

Montia
fontana L.

Philippiamra
amaranthoides (Phil.) O.K. (e)
celosioides (Phil.) O.K. (e)
fastigiata (Phil.) Pax ex K. Hoffm. (e)

PRIMULACEAE

Anagallis
minima (L.) Krause

Androsace
salasii Kurtz

Pelletiera
verna St.-Hil.

RANUNCULACEAE

Myosurus
apetalus Gay
patagonicus Speg.

Ranunculus
apiifolius Pers.
bonariensis Poir.
chilensis DC.
flagelliformis J.E. Sm.
pseudotrullifolius Skottsb.

ROSACEAE

Aphanes
berteroana Rothm. (e)
looseri (Rothm.) Rothm. (e)
neglecta (Rothm.) Rothm.

RUBIACEAE

Cruckshanksia
pumila Clos (e)
tripartita Phil. (fa)(e)

Galium
fuegianum Hook. f. (fa)
aparine L.**

SANTALACEAE

Quinchamalium
berteroanum Phil. (e)
bracteosum Phil. (e)
carnosum Phil. (fa)(e)
excrescens Phil. (e)
litorale Phil. (e)
parviflorum Phil. (e)

**The status of *Galium aparine* L. in Chile is complex. Dempster (1981) states "it is highly probable that South American plants are for the most part native, but that the species has also been introduced from Europe...".

SAXIFRAGACEAE

Lepuropetalon
spathulatum (Muhl.) Elliot

SCROPHULARIACEAE

Bartsia
chilensis Benth. (e)

Calceolaria
bipinnatifida Phil.
hollermayeri Kraenzl. (e)
scabiosifolia Sims

Euphrasia
antarctica Benth.
meiantha Clos (fa)
perpusilla Phil. (e)

Limosella
australis R. Br.

Lindernia
dubia (L.) Pennell (fa)

Mimulus
acaulis Phil. (e)
bridgesii (Benth.) Clos (e)
depressus Phil. (e)
glabratus H.B.K.
luteus L. (fa)(ev)
nanus Phil.

Orthocarpus
attenuatus A. Gray
laciniatus (H. et A.) Keck

SOLANACEAE

Cacabus
flavus Johnst.
integrifolius Phil. (e)

Nicandra
physalodes (L.) Gaertn.

Nicotiana
acuminata (Graham) Hook. (ev)

corymbosa Remy
linearis Phil.
longibracteata Phil.
miersii Remy (e)
noctiflora Hook. (fa)
pauciflora Remy (e)
petunioides (Griseb.) Millan
undulata R. et P.

Reyesia
parviflora (Phil.) Hunz.

Schizanthus
alpestris Poepp. ex Benth. (e)
candidus Lindl. (fa)(e)
grahamii Gill. ex Hook.
hookeri Gill. ex Graham (fa)(e)
integrifolius Phil. (e)
lacteus Phil. (e)
laetus Phil. (e)
litoralis Phil. (e)
parvulus Sudzuki (e)
pinnatus R. et P. (e)
porrigens Graham (e)
tricolor Grau et Gronb. (e)

Solanum
andinum Reiche (a?)(e)
euacanthum Phil.
furcatum Dunal ex Poir.
gaudichaudii Dunal (e)
heterantherum Witasek ex Reiche (e)
maritimum Meyen ex Nees (e)
nigrum L. (ev)
patagonicum Morton (fa)
pentlandii Dunal

UMBELLIFERAE

Apium
laciniatum (DC.) Urban (ev)
leptophyllum (Pers.) F. Muell. ex Benth.

Asteriscium
aemocarpon Clos (e)
closii (O.K.) Math. et Const. (e)

Bowlesia
incana R. et P.
macrophysa Zoell. (e)
paposana Johnst. (e)
sodiroana Wolff
uncinata Colla (e)

Daucus
montevidensis Link ex Sprengel (a?)

Domeykoa
oppositifolia Phil. (e)

Eryngium
anomalum H. et A. (e)
coquimbanum Phil. ex Urban (e)
depressum H. et A. (e)
macracanthum Phil. (e)
pulchellum Phil. (e)

Homalocarpus (E)
bowlesioides H. et A. (e)
dichotomus (Poepp. ex DC.) Math. et Const. (e)
digitatus (Phil.) Math. et Const. (e)
dissectus Math. et Const. (e)
integerrimus (Turcz.) Math. et Const. (e)
nigripetalus (Clos) Math. et Const. (e)

URTICACEAE

Parietaria
debilis G. Forster

Urtica
berteroana Phil.
flabellata H.B.K.

VALERIANACEAE

Plectritis
samolifolia (DC.) Hoeck (e)

Valeriana
aequiloba Clos (e)
crispa R. et P. (e)
floribunda Phil. (e)
grandifolia Phil. (e)
oreocharis Phil. (e)
polemoniifolia Phil.
sphaerocarpa Phil. (e)
valdiviana Phil. (e)
virescens Clos

VERBENACEAE

Verbena
dissecta Willd. (a?)

VIOLACEAE

Viola
araucaniae Becker (e)
aurata Phil. (e)
auricula Leyb. (e)
bicolor Reiche (e)
brachypetala Gay (a?)(e)
calderensis Becker (e)
chamaedrys Leyb. (e)
chrysantha Phil.
domeykoana Gay
frigida Phil. (ev)
glechomoides Leyb. (e)
godoyae Phil. (e)
johnstonii Becker (e)
litoralis Phil. (e)
llullaillacoensis Becker (e)
minutiflora Phil. (e)
nubigena Leyb. (e)
ovalleana Phil. (e)
polypoda Turcz. (e)
pulchella Leyb. ex Reiche (e)
pulvinata Reiche (e)
pusilla Poepp. (e)
rhombifolia Leyb. (e)
taltalensis Becker (e)
vallenarensis Becker (e)
werdermannii Becker (e)

VIVIANACEAE

Araeoandra (E)
tenuicaulis (Barn.) Lefor (e)

ANGIOSPERMAE:

MONOCOTYLEDONEAE

AMARYLLIDACEAE

Alstroemeria
graminea Phil. (e)

CYPERACEAE

Cyperus
rivularis Kunth
volckmannii Phil. (e)

Scirpus
cernuus Vahl (nv)

GRAMINEAE

Agrostis
gelida Trin. (e)
oligoclada Phil. (e)
serranoi Phil. (e)

Alopecurus
heleochloides Hackel (e)

Bouteloua
simplex Lag.

Bromidium
anomalum (Trin.) Doell
trisetoides (Steud.) Rugolo (e)

Bromus
berterianus Colla
gunckelii Matthei (e)

Chaetotropis
chilensis Kunth

Deschampsia
airiformis (Steud.) Benth.
berteroana (Kunth) Trin. (e)
danthonioides (Trin.) Munro ex Benth. (e)
looseriana Parodi (e)
monandra Parodi (e)

Diplachne
uninervia (J. Presl) Parodi

Eragrostis
mexicana (Hornem.) Link
virescens J. Presl

Hordeum
pusillum Nutt.

Koeleria
grisebachii Domin

Muhlenbergia
peruviana (P. Beauv.) Steud.

Munroa
andina Phil.
decumbens Phil.

Phalaris
amethystina Trin.
angusta Nees ex Trin.

Poa
pumila Phil. (a?)

Polypogon
linearis Trin. (e)

Stipa
annua Mez

Trichoneura
weberbaueri Pilger

Vulpia
antofagastensis Parodi
australis (Nees) Blom
eriolepis (Desv.) Blom

JUNCACEAE

Juncus
bufonius L.
capitatus Weigel

LILAEACEAE

Lilaea
scilloides (Poir.) Haum.

CONCLUDING REMARKS

692 (15.7%) of the native vascular plant species of continental Chile are annual or facultatively annual (Table 1). The annual habit is found in 196 (24.7%) native genera and 53 (31.2%) native plant families (Table 1). The frequency of the annual habit is significantly higher among dicotyledons than among monocotyledons at the species, generic and familial levels (Table 1). The ten largest genera for annuals in continental Chile are: *Calandrinia* (Portulacaceae) - 31 spp.; *Cryptantha* (Boraginaceae) - 29 spp; *Cristaria* (Malvaceae) - 27 spp.; *Viola* (Violaceae) - 26 spp; *Loasa* (Loasaceae)- 20 spp.; *Chaetanthera*

Table I. Summary of frequency of annual habit in the native flora of continental Chile

	N° species studied	Obligate annuals	Facultat. annuals	Probably annuals	Total species N	Total species %	Genera N	Genera %	Families N	Families %
ANGIOSPERMAE	4282	592	79	20	691	16.14	195	26.17	52	34.90
Dicotyledoneae	3374	554	79	19	652	19.32	171	29.38	47	37.90
Monocotyledoneae	908	38	0	1	39	4.30	24	14.72	5	20.00
GYMNOSPERMAE	16	0	0	0	0	0	0	0	0	0
PTERIDOPHYTA	110	1	0	0	1	0.91	1	2.56	1	5.88
TOTAL VASCULAR FLORA	4408	593	79	20	692	15.70	196	24.72	53	31.18

G = 150.34*** (dicots. versus monocots. - species level); G = 15.42*** (dicots. versus monocots. - generic level); G = 3.090; NS (dicots, versus monocots. - familial level).

(Asteraceae) - 18 spp.; *Lepidium* (Cruciferae) - 15 spp.; *Plagiobothrys* (Boraginaceae) and *Vicia* (Papilionaceae) - 14 spp.; *Oenothera* (Onagraceae) - 13 spp. However is should be noted that many of the annuals cited for *Vicia* require further confirmation. Moreover *Calandrinia*, *Cristaria*, *Viola*, *Loasa*, *Plagiobothrys* and *Vicia* require revision. The final number of annual species in these genera judging by the trend seen in other recently revised Chilean genera, might turn out to be lower than presently indicated. Other important genera for annuals in Chile are *Schizanthus* (Solanaceae) with 12 species, and *Gnaphalium* (Asteraceae), *Schizopetalon* (Cruciferae), *Oxalis* (Oxalidaceae), and *Adesmia* (Papilionaceae), all with 10 species.

358 (51.7%) annual species are fairly certainly endemic to continental Chile, while an additional 18 species (2.6%) are characterized by endemic Chilean infraspecific taxa. A further 20 species are probably endemic to continental Chile as are varieties of 3 species. Recent work (Marticorena, unpublished) has shown that 67 (8.5%) of native genera are endemic to continental Chile. Interestingly, seven endemic genera (10.4%) are exclusively annual to facultatively annual in habit (*Cyphocarpus* (Campanulaceae); *Microphyes* (Caryophyllaceae); *Moscharia* (Asteraceae); *Agallis* (Cruciferae); *Scyphanthus* (Loasaceae); *Homalocarpus* (Umbelliferae); *Araeoandra* (Vivianaceae)). These genera, all small, undoubtedly evolved very recently in Chile, as of the Tertiary with the development of arid climates (Arroyo et al., 1988). Such genera constitute interesting material for detailed evolutionary studies in that their ancestors are very likely to be found directly in the extant Chilean flora.

Continental Chile clearly possesses proportionately fewer annuals than the State of California (Raven & Axelrod, 1978) yet more than the Cape floristic region of South Africa (Goldblatt, 1978). Because continental Chile extends further into higher and lower latitudes than California, relatively fewer annuals in continental Chile in relation to California is not entirely unexpected (cf. Arroyo et al., 1988). California is more perfectly matched physiographically and climatically to central Chile. Work is now in progress in order to determine whether central Chile contains proportionately as many native annuals as California.

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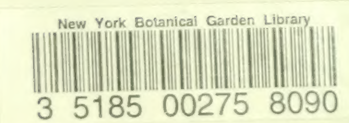
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